

1 IN THE UNITED STATES DISTRICT COURT
2 FOR THE EASTERN DISTRICT OF MICHIGAN
3 SOUTHERN DIVISION

3 SHERROD, TEED, VANDERHAGEN)
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1 Monday, May 16, 2022

2 9:10 a.m.

3 -- --- --

4 MR. CAMPBELL: Just a couple of things, Your Honor.

5 The slides that Mr. Maimon provided for Dr. Crakes, there are a
6 couple of issues. They include the not only the undiscounted
7 calculation, but the discounted calculation and it's my
8 understanding is that that's something that the Court does so
9 that the testimony about it, I don't believe is proper, but I
10 thought it was just undiscounted. That's the one issue on the
11 slides.

12 The second issue is that the last slide identifies
13 things that he is not testifying about, losses not appraised.
14 You know, there's a lot of things I suppose he's not addressing
15 and I don't think that's an appropriate slide to include all of
16 these things that that he -- you know, it's an economic
17 analysis. It's clear to the jury what he's addressing.

18 THE COURT: Just a second, just logging in and I don't
19 want to miss what you're saying. There we go, thank you.

20 MR. CAMPBELL: And then just finally, Your Honor, we
21 raised in a *Daubert* challenge whether Dr. Crakes could testify
22 given the foundational support and that we just want to
23 re-raise that, understanding the Court's ruling that you're
24 going to permit Dr. Crakes to testify. But, you know, he's
25 testifying about the inability to obtain certain educational

1 plateaus or accomplishments and the testimony -- and based on
2 the testimony from Dr. Krishnan and that foundation isn't
3 there.

4 Dr. Krishnan testified that it doesn't support the
5 assumptions made by Dr. Crakes. So I just went to reiterate
6 that objection, Your Honor.

7 THE COURT: Okay. With respect to the discounted,
8 this is not discounted. I don't know -- what is your position
9 on that?

10 MR. MAIMON: Sure. And the first slide where this
11 appears is Slide 11 and 12. Just for the Court's --

12 THE COURT: Yes. Please.

13 MR. MAIMON: The jury, pursuant to the Court's
14 instructions, will award damages undiscounted for future value.
15 However, and Dr. Crakes is not telling the jury in any event
16 what number to give. He's saying in different scenarios these
17 are the appraised economic losses, but he is going to explain
18 to the jury what it means to have numbers that are undiscounted
19 and the order of magnitude is important for the jury to
20 understand not simply as an abstract matter but when you apply
21 the statutory five percent, this is what it means in today's
22 dollars. But the undiscounted number is the number that we're
23 going to be, you know, guided by with the jury.

24 Obviously, it's a question of fact for a jury. The
25 jury awards the numbers. Mr. Campbell is, unfortunately,

1 wrong. He's not telling the jury what's going to happen to
2 these kids. He's giving different economic appraisal scenarios
3 depending on what they find as the finders of fact. So he's
4 not --

5 THE COURT: So what is wrong, Mr. Campbell, with him
6 simply portraying for them what a discounted number looks like
7 and what an undiscounted number looks like?

8 MR. CAMPBELL: So I think there are two problems with
9 that. Number one, I don't believe that he provided any
10 undiscounted information in his reports. It was all -- I'm
11 sorry. Discounted information in his reports. I believe it
12 was all undiscounted.

13 THE COURT: But this *Daubert* -- in the cases relating
14 to *Daubert* contemplate that an expert is going to explain
15 what's in the report. They're not going to just read their
16 report, obviously, but when you've got a jury, they're going to
17 sort of put a little more meat on the bones of what they're
18 talking about.

19 MR. CAMPBELL: So I can't really speak to that
20 particular issue. I can speak to there's no disclosure about
21 discounted values in his report or how you get there or how he
22 does it or what factor he's going to use to do that. That is
23 something that in Michigan, as I understand it, the Court does
24 it.

25 And the second issue is -- well, those are the two

1 issues. It's not disclosed and it's a court function. And
2 then as to what the jury can or cannot do, clearly if there was
3 foundational support for these opinions, then the jury would be
4 able to select it. But here throwing these numbers out through
5 Dr. Crakes necessarily requires the jury to speculate and guess
6 as to whether or not these four plaintiffs can attain any of
7 these educational goals or not; whether they were capable to
8 began with and whether or not their situations are such that
9 they won't. And, you know, the testimony is -- doesn't support
10 it. It's that it will be more difficult.

11 MR. MAIMON: The second point --

12 THE COURT: Yeah, Mr. Maimon.

13 MR. MAIMON: The second point is simply re-arguing
14 the *Daubert* decision.

15 THE COURT: Correct.

16 MR. MAIMON: I'm not going to re-argue it.

17 THE COURT: No, but what if Dr. Crakes gives us an
18 example of discounted and undiscounted?

19 MR. MAIMON: So he's not expressing -- he's not using
20 any judgments. So sometimes when experts do discounts, they
21 exercise independent judgment. For instance, as to what is the
22 proper discount rate. He's not doing that. He's taking the
23 Michigan statutory five percent and showing what that does
24 here, very simply. So it's not a matter of disclosure, not
25 disclosure. It's simply this is the Michigan statutory scheme

1 where, yes, Mr. Campbell is correct that your Honor in the
2 event of a verdict, will have to do this discounting, but he's
3 not saying I believe that a proper discount rate is this or
4 it's my opinion that it's that.

5 He's already disclosed what he believes the growth
6 rate is of the earnings and this is just this other side of it.
7 It's statutory.

8 THE COURT: Yes.

9 MR. MAIMON: And, again, this is not binding on a
10 jury. This is just explaining the magnitude of it.

11 MR. MASON: Your Honor, may I address this?

12 THE COURT: Yes.

13 MR. MASON: There is no reason to confuse this jury.
14 Counsel reached out to us and said we can go with undiscounted
15 or discounted. What would you agree to, and the response was
16 from VNA that we go with what the standard undiscounted is.
17 And the reality is by doing this, he gets it both ways. It's
18 confusing to the jury to try and educate about what the Court
19 will do later. That's the reason that in Michigan, the court
20 does it later on. So all he has to do is talk about it in the
21 one context, not try and educate on the other. It's confusing
22 and unnecessary.

23 THE COURT: It's math. It's a percentage. It's not
24 that complicated. So -- and I don't think this will inflame
25 the jury's passion. I just don't see this as an issue other

1 than assisting the jury on understanding what -- where these
2 numbers come from, how this math is done. So for now, let's
3 just keep them as they are.

4 And then with the last slide where -- Mr. Maimon, what
5 is your response as to why Dr. Crakes should testify about
6 things he's not testifying about?

7 MR. MAIMON: So he is giving economic testimony about
8 certain elements. He's not talking about other things and just
9 in the same way that we defined the scope of what an expert is
10 doing, he's honestly telling the jury, I have not been called
11 upon and I'm not talking about these elements. It's possible.
12 I've seen cases where economists try and put values on the
13 things he's saying.

14 THE COURT: That's true.

15 MR. MAIMON: I'm not doing it.

16 THE COURT: So why don't you just do that at the
17 beginning? You're not here to give numbers -- are you here to
18 give numbers about --

19 MR. MAIMON: I'll move this to the beginning, no
20 problem.

21 THE COURT: Just move it to the beginning so that we
22 know what -- he's actually not doing that in this case because
23 often that's the only type of damages.

24 MR. MAIMON: Right. The reason that I put it at the
25 end, your Honor, is there's one element in there, the first

1 one, under performance in earnings, which is -- he's not
2 opining on whether or not in a work setting any one of these
3 kids will under perform or over perform. This is simply the
4 median -- statistical median of, you know, kids their age and
5 so forth and depending on -- and this is especially relevant
6 given Dr. Krishnan's testimony last week, that workplace
7 challenges that each of these kids will likely encounter, he's
8 not factoring that in. I can do it in the beginning or do I
9 can do it throughout, but that's the reasoning it's behind.
10 But I'm fine with moving this slide to the beginning.

11 THE COURT: Okay. And what was the third thing?

12 MR. MAIMON: That was it.

13 MR. STERN: There were two parts to the first one.

14 THE COURT: Got it.

15 So we have a juror with two full-day job trainings on
16 June 13th and 14th. We'll have to deal with this. She's
17 having a number of job-related issues. So we'll deal with this
18 later today.

19 We also have to stop at 12:15 tomorrow for a juror,
20 has a doctor's appointment.

21 So let's get the jury in, and when the jury is on the
22 way, could you call the case?

23 THE LAW CLERK OF THE COURT: Yes.

24 THE COURT: Thank you.

25 MR. CAMPBELL: And, your Honor, what's our mask

1 policy?

2 THE COURT: The Eastern District, we had a staff
3 meeting at 10:00 on Friday and it was looking like we were
4 headed toward fewer masks, and then at three p.m. we got an
5 administrative order, put the masks back on in all the public
6 and common use areas. So we'll just keep the same policy
7 inside the courtroom.

8 MR. CAMPBELL: Okay. So ...

9 THE COURT: So when you're examining or the
10 cross-examiner, you can have it off.

11 MR. CAMPBELL: So may I keep it off as the direct
12 goes?

13 THE COURT: Yes. But have it on when you're standing
14 and the jury's coming in.

15 MR. CAMPBELL: Yes, Your Honor.

16 THE COURT: Yeah. Thank you.

17 Will you call the case?

18 THE LAW CLERK OF THE COURT: Calling Sherrod, Teed
19 Vanderhagen and Ware versus VNA and LAN.

20 MR. STERN: Good morning, Your Honor, Corey Stern and
21 Moeshe Maimon for the plaintiffs.

22 THE COURT: Thank you.

23 MR. CAMPBELL: Good morning, Your Honor, James
24 Campbell and Cheryl Bush for the VNA defendants.

25 THE COURT: Thank you.

1 MR. MASON: Good morning, Your Honor, Wayne Mason and
2 Travis Gamble for LAN.

3 THE COURT: And Mr. Mason, are you doing the
4 cross-examination of this?

5 MR. MASON: Mr. Gamble.

6 THE COURT: Mr. Gamble. Good.

7 THE LAW CLERK OF THE COURT: All rise for the jury
8 (At 9:16 a.m., jury enters courtroom.)

9 THE COURT: Welcome back to the jury. Our Zoom,
10 you're not on the Zoom, but just the rest of us are and it
11 seems to be frozen so we're going to have to ...

12 Oh, it's back. Never mind.

13 So, Mr. Maimon, do you have a witness you would like
14 to call on behalf of the plaintiffs?

15 MR. MAIMON: Yes, Your Honor, at this time the
16 plaintiffs call Professor, Gary Crakes

17 THE COURT: Okay.

18 (Witness enters courtroom.)

19 THE COURT: Do you solemnly swear or affirm to tell
20 the truth, the whole truth and nothing but the truth?

21 THE WITNESS: I do.

22 THE COURT: Good. And you can have a seat in the jury
23 box.

24 And while you're in there, if you would like to take
25 your mask off, you can, but you're not required to.

1 THE WITNESS: Thank you, Your Honor.

2 MR. MAIMON: May I proceed, Your Honor?

3 THE COURT: Yes, please.

4 MR. MAIMON: Thank you.

5

6 GARY M. CRAKES, M.D.

7 called as a witness by the Plaintiff at 9:16 a.m. and having
8 been first duly sworn, testified as follows:

9 DIRECT EXAMINATION

10 BY MR. MAIMON (Continued):

11 Q. Good morning, Dr. Crakes.

12 A. Good morning.

13 Q. We have our court reporter to the left of you, our jurors.
14 And if you could introduce yourself to the members of the jury.

15 A. Yes, my name is Gary Crakes. Last name is C-r-a-k-e-s.

16 Q. And you are a professor of economics?

17 A. A Professor Emeritus of Economics.

18 Q. So that was going to be my question. What is your current
19 position or your present position?

20 A. My present position is a Professor Emeritus of Economics
21 at Southern Connecticut State University in New Haven.

22 Q. And just so we know, what is -- there's a microphone in
23 front of you, if you could try and keep your voice not only
24 reasonably loud, but speak into the microphone.

25 What does Emeritus mean?

1 A. Emeritus is a designation given in some situations after a
2 professor has retired from their university activities.

3 Q. And you said you were a Professor at Southern Connecticut
4 State University?

5 A. Yes.

6 Q. How long were you there for?

7 A. On a full-time basis, I was there from 1980 until 2011,
8 initially at the rank of assistant professor and promoted to
9 associate professor, full professor, and then in 2011 professor
10 emeritus designation.

11 Q. And could you generally describe for our jurors your
12 duties and responsibilities at Southern Connecticut State
13 University during that period of time, 1980 to 2011?

14 A. My duties included classroom instruction, both
15 undergraduate and graduate, research activities, publication
16 activity, student advisement and membership on various
17 university administrative committees.

18 Q. Sounds like a full-time job.

19 A. Yes, it was.

20 Q. Okay. Have you come to court at our request to give us
21 your appraisal of potential economic loss to Emir Sherrod,
22 Aundrea Teed, Riley Vanderhagen and Daylaana Ware?

23 A. Yes.

24 Q. And when you use the term "appraisal of economic loss,"
25 what do you mean by that?

1 A. In this matter it refers to the loss of the earning
2 capacity of the four individual children, a comparison of what
3 they would have been able to earn absent the incident under
4 consideration, and what they now may be able to earn with that
5 impairment.

6 Q. Okay. And before we get to your actual opinions in that,
7 first of all, can we agree that the opinions that you're going
8 to give our jurors today will be opinions to a reasonable
9 degree of certainty in economics?

10 A. Yes.

11 Q. Okay. Let's talk a little bit about your background that
12 brings you to this point. Can you describe your educational
13 background for us?

14 A. Yes. I received a bachelor's degree in economics from
15 Central Connecticut State College in 1975, a master's degree in
16 economics from the University of Connecticut in 1976, and Ph.D.
17 in economics from the University of Connecticut, which I
18 completed in 1984.

19 Q. Okay. And during the course of your studies, did you
20 receive any fellowships or honors?

21 A. Yes.

22 Q. Tell us about those.

23 A. I received the University of Connecticut Predoctoral
24 Fellowship to provide financial support for my first year of
25 graduate studies; a University of Connecticut Dissertation

1 Fellowship to provide financial support for my dissertation
2 research and in a national competition, a Richard D. Erwin
3 fellowship to provide support for my research as well.

4 Q. What about any awards for your teaching experience?

5 A. I receive the University's Teacher of the Year Award in
6 1987, and the School of Business Teaching Award in 1998.

7 Q. Have you been ever honored for your services as an
8 economic expert?

9 A. Yes.

10 Q. Tell us a little bit about that. What's the nature of
11 that honor?

12 A. It was associated with pro bono or volunteer appraisals of
13 economic loss that I performed on behalf of the families of the
14 victims of the terrorist attack on the World Trade Center
15 through this U.S. Department of Justice's Victim Compensation
16 Fund.

17 Q. Now, you told us a little bit about the work that you have
18 done at Southern Connecticut State University. Tell us some
19 about your employment history as an economist.

20 A. After completing my master's degree in 1976, I became
21 employed on a variety of health economics research projects as
22 a research assistant at the Universities of Connecticut Health
23 Center. I continued that employment for approximately three
24 years, and then began teaching on a part-time basis at both the
25 Hartford branch of the University of Connecticut and at

1 Southern Connecticut State University in New Haven. And then
2 in the fall of 1980 began my full-time appointment initially as
3 an assistant professor at Southern Connecticut in the fall of
4 1980, which I continued, as I indicated earlier, until 2011.

5 Q. Okay. And we have peer professional organizations. Are
6 you a member of any professional organizations that bear on
7 what we're going to talk about today?

8 A. The -- I am a member of a number of different professional
9 organizations, the American Economic Association, the Eastern
10 Economic Association, the National Association of Forensic
11 Economics, the American Academy of Economic and Financial
12 Experts, the National Association of Business Economics and
13 International Honor Society in Economics, Omicron Delta
14 Epsilon.

15 Q. We'll put the Latin letters aside.

16 THE COURT: Omicron Aside.

17 BY MR. MAIMON (Continued):

18 Q. Omicron aside. You mentioned forensic accounting, what is
19 forensic accounting?

20 A. Forensic economics.

21 Q. I'm sorry. Forensic economics.

22 A. Forensic economics relates to the types of matter that
23 we'll be discussing here today. It's the calculation of
24 economic losses that are experienced by individuals, in some
25 case by business. My focus is on those experienced by

1 individuals.

2 Q. Okay. And have you published any articles in your field?

3 A. Yes, I have.

4 Q. How many?

5 A. I've had approximately 22 referee publications.

6 Q. Referee publications. We heard about peer-review
7 journals, is that the same thing?

8 A. Yes.

9 Q. Okay. What kind of appraisals of loss have you done?

10 A. I've performed appraisals of economic loss for a variety
11 of different occupations, different levels of educational
12 attainment that have been achieved for individuals in wrongful
13 death, personal injury matters, some employment litigation
14 matters.

15 Q. And have you worked with attorneys such as myself in
16 appraising economic loss in individual cases?

17 A. Yes.

18 Q. Have you done so at the request of lawyers representing
19 the plaintiffs as well as lawyers representing defendants?

20 A. Yes.

21 Q. Does your methodology change depending on who retains you?

22 A. No.

23 Q. Do your rates change depending on who retains you?

24 A. No.

25 Q. Do you use the same assumptions and the same statistics in

1 order to reach your opinions either way?

2 A. Yes.

3 Q. Okay. You have the final bullet point here,
4 "Proceedings," what do you mean by "Proceedings" there?

5 A. Different ways in which referee publications can occur.
6 You can publish an article in a journal where it's reviewed and
7 accepted or rejected for publication. There are also
8 professional proceedings where there is a referee process as
9 well, and if your paper is accepted for presentations at a
10 conference, may be published in the proceedings, basically, a
11 collection of research papers from that conference.

12 Q. And who -- what types of people attend the type of
13 conferences that you've had proceedings in, that you've
14 presented at?

15 A. Largely academics.

16 Q. Okay. In the field of economics?

17 A. Yes.

18 Q. Okay. So we're going to talk about the appraisal of
19 economic loss that you did in these four cases, but were there
20 potential losses that you did not appraise?

21 A. I believe so, yes.

22 Q. So let's talk a little bit about them. I want to skip the
23 first bullet point, but we have here: "Emotional Suffering,
24 Mental Anguish, Denial of Social Pleasures and Enjoyments,
25 Embarrassment, Humiliation and Mortification, Disability

1 Including the Loss or Impairment of Neurocognitive Function.

2 Did you attempt to place an appraised number on any of
3 those potential losses that any of these children will suffer?

4 A. No.

5 Q. Okay. We have up on top under "Performance of Earnings,"
6 what do you mean by that?

7 A. Well, what I have done is calculated based upon different
8 alternative estimates. The unimpaired earnings that each of
9 the children may have achieved over their lifetime based on
10 different levels of education attainment and then subtracted
11 from that the median earnings based on level of educational
12 attainment that are more likely with that impairment. I am not
13 estimating any type of median earnings where there's a
14 reflection of under performance in terms of the impact of these
15 individuals who experience earnings different from what the
16 median is for those educational levels.

17 Q. Okay. And we'll get to some statistical terms like median
18 and so forth in a minute, but when you use the term "impaired
19 earnings" what do you mean by that?

20 A. Earnings with an impairment.

21 Q. And then unimpaired earnings, when an economist such as
22 yourself use that terms, what do you mean by that?

23 A. Earnings without an impairment.

24 Q. Okay. And when you make those evaluations, do you do
25 it -- let's say unimpaired earnings. Do you look at somebody

1 and say I think that they're going to achieve this and his or
2 her unimpaired earnings will be this, or do you go about it in
3 another way?

4 A. Well, I'm not qualified to make a determination of what
5 the individual would have been able to do or will be able to
6 do.

7 What I'm relying on are the median earning values for
8 those particular levels of educational attainment that are
9 being evaluated.

10 Q. So we'll get to it in a minute, but are you here to tell
11 us that any of these four kids suffer from any particular
12 injury?

13 A. I'm not qualified to make a determination or a valuation
14 of their injury.

15 Q. And are you here to say what they will achieve or a what
16 they will not achieve?

17 A. No. Again, I'm not qualified to make that determination.

18 Q. You're just taking different scenarios and sharing with
19 our jurors the economic impact that those scenarios might have
20 on them as a statistical basis, right?

21 A. That's correct.

22 Q. Okay. And when we're talking about under performance of
23 earnings, if there's an attainment of a certain degree of
24 education, you said you're looking at the median. What does it
25 mean to look at the median?

1 A. When we think about data sets that are available on
2 earnings values for individuals by age, by gender, by level of
3 education, there are what we call measures of central tendency,
4 a value that represents some type of approximation of all the
5 values in that sample, in that data series. We typically think
6 of the mean or the average as being calculated.

7 THE COURT: Could you slow down just a little bit and
8 maybe get a little closer to the microphone?

9 THE WITNESS: I can do that, thank you.

10 THE COURT: So the mean is the average?

11 THE WITNESS: Yes, Your Honor.

12 THE COURT: Okay. So then tell us what the median
13 is.

14 THE WITNESS: If we have a series of data and we rank
15 those values from highest to lowest, the median value is that
16 which occupies the middle position in that ranking. So if we
17 had seven numbers, seven values and we rank them from the
18 lowest value to the highest value, the median value would be
19 that which occupies the fourth position in that ranking, the
20 middle position.

21 BY MR. MAIMON (Continued):

22 Q. And that might be different than the average of the mean?

23 A. Typically in most circumstances it's less than the mean.

24 Q. Okay. And so why, when you're doing an economic appraisal
25 of economic loss, why do you use the median as opposed to the

1 mean or the average?

2 A. The mean values are more likely to be affected by extreme
3 values. If in that ranking of the seven annual earning values
4 that I was referring to earlier, we had one person who was
5 making a million dollars a year, it would affect the mean
6 because that would be factored into the calculation of the
7 average value. It would not affect the median. So the median
8 is less determined by extreme value less subject by what's
9 called skewness.

10 THE COURT: Called what?

11 THE WITNESS: Skewness, S-k-e-w-n-e-s-s.

12 BY MR. MAIMON (Continued):

13 Q. That would be like skewing the result toward one side?

14 A. Yes. And that's why when median values are available,
15 that's what I will rely on.

16 Q. Okay. What does that do as far as the, you know, how
17 conservative the estimates are that you're making?

18 A. I think there were values -- when you have median values
19 and rely on those, your estimates are more reasonable.

20 Q. Okay. So let's talk a little bit about how you go about
21 doing an appraisal of economic loss. And first of all, talk to
22 us about the sources of data that you use as an economist to do
23 such an appraisal.

24 A. The sources would range from the -- for example, the
25 National Center for Vitals Statistics of the U.S. Department of

1 Health and Human Services, the Bureau of Labor Statistics of
2 the U.S. Department of Labor, data from the Social Security
3 Administration and then other sources that would be available
4 as well. But it's largely based on government data sources.

5 Q. And in doing an appraisal of economic loss, do you take a
6 look at -- or do you have to take into account how long you
7 think someone's going to work or how long you think they're
8 going to live?

9 A. Well, the calculation of the loss of earning capacity, the
10 capacity an individual would have had to experience earnings,
11 and that earning capacity would be measured over a period of
12 time over their life where they would be employed or have the
13 potential to be employed.

14 Typically, the estimate would be whenever the
15 educational level begins. If it's someone who's a high school
16 graduate, the calculation would begin at age 18. Someone who
17 has a bachelor's degree, perhaps at age 23, and then would be
18 calculated for a period of time, typically in the calculations
19 I made to age 67.

20 Q. Okay. And in taking a look at when -- or how long you
21 expect them to either work or you take a look at how long you
22 think someone is likely to live, what type of data or what type
23 of basis do you rely upon?

24 A. Well, first for the calculation of the life expectancy,
25 that would be based on the data from the National Center for

1 Vital Statistics of the U.S. Department of Health and Human,
2 Services which is simply the average life expectancy based on
3 age and gender. That would be your the first step.

4 The calculation of that period of time of employment
5 or to age 67, is based on a review of tables for what is called
6 work-life expectancy, tables for years to final separation from
7 the labor force, the current law for Social Security benefits.
8 The standard benefit is attained at age 67. The maximum
9 benefit at age 70. I took all of those factors into
10 consideration and evaluated the earning capacity of the four
11 children to age 67.

12 Q. So are you saying that there's a table that's published,
13 that if I take a look at it and I put in my gender and my age,
14 it will tell me how long I can be expected to live on average?

15 A. Yes.

16 Q. Does that mean that I'm going to live that long or live
17 that long?

18 A. No. It's a statistical average.

19 Q. And same thing with work-life expectancy, are there tables
20 that tell us for somebody a male my age, how long I can expect
21 to work?

22 A. It tells you the number of years that you would be active
23 in the labor force, not necessarily additive to your age.

24 Q. Okay. Again, does that tell us whether any particular
25 person is going to work to that age?

1 A. It's an average.

2 Q. It's an average. Okay. And then you mentioned also you
3 take a look at median values for earnings, and is this one of
4 the charts or sources of statistics that you used here?

5 A. Yes. These are the median annual earnings values from the
6 most recent Annual Social and Economic Supplement, which
7 provides median earnings by age, gender and level of
8 educational attainment.

9 Q. So if you can walk us through this chart a moment, and if
10 it helps, we've got a quasi-pointer to your right, right
11 outside the jury box, if you want to reach up and use that to
12 show our jurors what each of these columns mean and how they
13 factor into the analysis that you made?

14 A. I'm not sure I'm locating a pointer.

15 A JUROR: It's the broomstick.

16 MR. MAIMON: There you go. I didn't want to say
17 broomstick.

18 THE WITNESS: The median annual earnings vary by age,
19 gender and level of education. These would be median annual
20 earning values for males by again, age and level education. So
21 that if we were to take, for example, the category of 25 to 34
22 years of age, the median annual earnings of a high school
23 graduate would be \$40,958 per year.

24 BY MR. MAIMON (Continued):

25 Q. Is that today or is that sometime in the future?

1 A. That would be today's value.

2 Q. Okay.

3 A. Similarly, as we're reviewing the table, without going
4 through each number, we tend to notice that earning values,
5 median earnings values tend to increase with the level of
6 educational attainment and generally tend to increase with age.
7 In some instances, the values may decline as we move past age
8 sixty-five, but that's the general observation about the
9 performance of those median annual earnings values.

10 Q. Okay. And then our next slide is for females, right?

11 A. Yes.

12 Q. And again, is this some value judgment on your part or on
13 the part of the people that put these together what the
14 relative earnings should be by gender or is this just
15 statistics?

16 A. It's a reporting of statistical data.

17 Q. Okay. And so in general, I mean, I just noticed that
18 these numbers are lower for females than they are for males?

19 A. Yes.

20 Q. Does that mean that Daylaana, Aundreya and Riley will earn
21 less than Emir?

22 A. Not necessarily. It's reflecting what this statistical
23 data showed for the most recent year that was available for
24 these data. As social and conditions change, those values may
25 change as well. That relationship or differential, I should

1 say, between those values may change as well.

2 Q. And as we've gone historically, for instance, in this
3 country, have the disparity in earning between males and
4 females changed over time?

5 A. Generally, I think it's declined. The differential has
6 declined somewhat. Not necessarily enough. I'm not making any
7 judgments in that regard.

8 Q. Understood. Those are just the facts, right?

9 A. Yes.

10 Q. Okay. You have up there a high school graduate,
11 including GED. In that column, do they differentiate or lump
12 all those two together, somebody who actually goes through high
13 school, graduates, gets their degree and hopefully, you know,
14 goes to a ceremony or somebody who just took the GED test and
15 passed?

16 A. The data to the best of my knowledge, is both combined.

17 Q. And will there be a range and that's why we're talking
18 about a median here?

19 A. Well, again, the value in the series would -- where they
20 report the median would be ranked from highest to lowest and
21 the median would be that value in the middle position in that
22 ranking.

23 Q. Okay. So you mentioned to us that these are the numbers
24 or these would be the statistical medians as of today, right?

25 A. That's correct.

1 Q. Okay. Could you talk to us a little bit about the concept
2 of future value of money versus present value of money and
3 undiscounted numbers in the future versus discounted to today?

4 MR. CAMPBELL: Your Honor, I object based upon what we
5 talked about earlier.

6 THE COURT: Okay. We need to just know what these
7 words mean. So overruled.

8 A. When we're looking at values that we expect to receive in
9 the future, they have a lower present value, basically, because
10 of the ability of money to earn interest. So if someone
11 promised you the payment one year from now of \$105, and I'll
12 say heroically suppose you could get five percent interest. If
13 you can get that \$105 today, it would be worth \$100 because it
14 would have the ability to earn that five percent interest over
15 the course of the next year. So any promise of a payment in
16 the future has a lower present value because of the ability of
17 money to earn interest.

18 On the other hand, we know that earnings will grow
19 over time. When we're applying this discounting concept to
20 earnings, we know that earnings have historically grown,
21 increased each year; raises, if you will, for workers in the
22 United States. So when we're estimating what we call
23 discounted values, we have to take into consideration both that
24 earnings will grow, but also that future values need to be
25 discounted or reduced to present value.

1 BY MR. MAIMON (Continued):

2 Q. Is that something that is standard and generally accepted
3 in the field of economics?

4 A. The concept of discounting, yes.

5 Q. Okay. And have you taken that into account, the growth of
6 earnings over time when you've done the appraisal of economic
7 loss for these four kids?

8 A. Yes, I have.

9 Q. Let's start talking about them and we'll talk about them
10 in alphabetical order of their last names. Okay?

11 A. That's fine. Thank you.

12 Q. And this is with the exception of one entry here, this is
13 a slide that Dr. Krishnan used last week to explain to the
14 members of the jury what she concluded about Emir Sherrod.

15 Did you have as part of the materials that you relied
16 on Dr. Krishnan's reports for each of the four kids?

17 A. Yes.

18 Q. And did you take those into consideration?

19 A. Yes, I did.

20 Q. Did I share with you what she actually told the members of
21 the jury when she came here and testified last week?

22 A. Yes.

23 Q. So we have down here, date of birth, March 29th, 2011 for
24 Emir Sherrod. Why is it important for someone like you to take
25 into account a person's date of birth when you're doing an

1 appraisal of economic loss?

2 A. Well, the date of the birth would provide us with the
3 point at which the individual would achieve age 18, age 23,
4 whatever age at which we're beginning the calculation of their
5 loss of earning capacity. So if someone is born on March 29th
6 of 2011, 18 years later would be March 29, of 2029. And that
7 is the period of time over which those earnings values would
8 have to be adjusted. That will vary in each case depending
9 upon the date of birth of the individual.

10 Q. So what you're doing, if I understand, correct me if I'm
11 wrong, is that you're saying that assuming that they would
12 start employment right after high school, I have to figure out
13 what that value is going to be for their median earning at that
14 point in time, right?

15 A. Yes.

16 Q. Okay. So let's talk a little bit about the calculations
17 that you made for Emir Sherrod. And I think it was -- it would
18 help us, if we can, you have here -- well, take us through this
19 slide. You have it, "Emir Sherrod, Appraisal of Economic Loss,
20 Bachelor's."

21 First of all, what does that title tell us about what
22 you're conveying in this slide?

23 A. This set of estimates is based upon the assumption that
24 absent injury, Emir Sherrod would have obtained a bachelor's
25 degree.

1 Q. Okay. And then what do you do with each of the boxes;
2 let's talk about undiscounted first.

3 A. Well, the no high school grad is based upon data for
4 median annual earnings of males with a ninth to twelfth grade
5 education who have not completed high school.

6 No college, is based upon the median earnings of male
7 high school graduates. No college graduates is based upon the
8 median earnings of males with some college. So that in each
9 case the loss has been calculated with the assumption that
10 Emir Sherrod would have obtained a bachelor's degree in an
11 unimpaired condition, and the impaired earnings are provided
12 for all three of these alternatives.

13 Q. And are you saying which one of these are likely or
14 unlikely?

15 A. No, I'm not.

16 Q. So that we have undiscounted, no high school -- well,
17 let's do it this way: If we can go to the Elmo and in the
18 binder that I put up in front of you, this is at tab four, are
19 these your calculations for Emir Sherrod?

20 A. Yes.

21 Q. Okay. So you have unimpaired as a male with a bachelor's
22 degree and then on Roman Numeral Number One, you have the same
23 number all this way across. What does that tell us?

24 A. That represents the undiscounted value of the median
25 earnings of a male with a bachelor's degree based on the date

1 of birth of Emir Sherrod.

2 THE COURT: But here you're not talking about loss,
3 you're talking about what he would earn?

4 THE WITNESS: Your Honor, what he could have earned
5 had he not been injured.

6 THE COURT: Okay.

7 BY MR. MAIMON: (Continued.)

8 Q. So if we're talking, just somebody who doesn't have any
9 type of impairment but would obtain -- but had the same birth
10 date as Emir Sherrod and graduated college, is this the median
11 value of those future dollars aggregated together?

12 A. Yes. It's taking the median annual values that we had up
13 on the screen a few moments ago for males with a bachelor's
14 degree and then applying them for each of the age intervals
15 that were established on that slide, and then assuming that a
16 three and-a-half percent rate of growth in earnings would be
17 applicable for each year going forward until the attainment
18 from age 23 to age 67.

19 Q. Now, the next section you have here is "Less impaired
20 earnings," and you have A, B and C. Does that correspond to
21 what we saw earlier about the three scenarios, not graduating
22 high school, graduating high school and having some college?

23 A. Yes.

24 Q. And for each of these you have a minus sign. And what do
25 those minus signs represent?

1 A. It represents the calculation of impaired earnings, what
2 Emir Sherrod may earn with his injury over the period of time
3 from age 18 to age 67, and as a male with some college from age
4 twenty 20 to age 67, taking the median annual earnings values
5 that were presented early and once again applying them for each
6 age interval with a three-and-a-half percent growth rate in
7 earning for each year in the future.

8 Q. And so this is for somebody who didn't graduate high
9 school with the same birth date as Emir Sherrod, this is that
10 aggregate earning over the work-life expectancy?

11 A. Based on the median annual earnings for males, yes.

12 Q. And this is again, this is nothing in particular to Emir,
13 right?

14 A. Other than the assumptions concerning education and his
15 date of birth, that's correct.

16 Q. And then the second one is somebody with this same birth
17 date as Emir who graduated high school, but didn't go to
18 college, that would be that aggregate earning on the median
19 statistical level, right?

20 MR. CAMPBELL: Your Honor, I object to the form of the
21 question.

22 THE COURT: I was just following along and not
23 focusing on the question.

24 BY MR. MAIMON (Continued):

25 Q. What is the \$7,772,044, what does that represent?

1 A. It represented the undiscounted value with median annual
2 earnings as a male high school graduate for the period of time
3 from age 18 to age 67 based upon those median annual earnings
4 values we established earlier.

5 Q. And given that date of birth that is the same as Emir's,
6 right?

7 A. Yes, and with the growth of earnings each year in the
8 future.

9 Q. And then finally, the final column, \$9,105,803, what does
10 that represent?

11 A. That represents the median annual earnings of Emir Sherrod
12 as a male who obtained some college education based on the
13 median values for each age increment over the period of time of
14 his work from age 20 to age 67.

15 Q. So each one of these is greater than the other. And how
16 does that play into what we saw when we saw that chart of
17 median values?

18 A. As I believe I indicated when we looked at it, the
19 tendency is for median annual earnings to rise with higher
20 levels of education attainment, which is the why the deduction
21 for impaired earnings is higher with each attainment of more
22 education.

23 Q. So when we're now going to take a look at the projected --
24 or at least the subtotal of the projected loss, they go the
25 other way. Each number is less than the last one. Is that

1 because this hypothetical person obtains higher degrees of
2 education all the way through?

3 A. Yes. Under the three alternative scenarios, the higher
4 levels of education in each case will result in larger impaired
5 earnings and a lower economic loss.

6 Q. Okay. And then you have one more column here and it says,
7 "Plus value of fringe benefits," and you have numbers for
8 those.

9 What are you trying to show here?

10 A. Fringe benefits are another form of compensation
11 associated with employment. I certainly don't know what fringe
12 benefits would be experienced over Emir Sherrod's lifetime.
13 What I have done is apply a ten percent value on the earnings
14 difference for the value of fringe benefits. We typically
15 think for average workers of fringe benefits as being much more
16 than ten percent of the earnings. However, I am not looking at
17 all of the employment-based legally mandated benefits. I'm
18 focusing on discretionary benefits that employers provide on
19 behalf of employees for pension and health related benefits
20 only.

21 Statistics show that on average is in the 12 to 13
22 percent range. I'm applying ten percent as a value for fringe
23 benefits. So ten percent of the previous subtotal, the
24 difference between the unimpaired and impaired earnings an
25 addition ten percent of that differential for fringe benefits.

1 Q. And so when we're talking about somebody not earning as
2 much because of an impairment, why are you taking into
3 accounting fringe benefits?

4 A. Because again fringe benefits can be another form of
5 earning capacity. The benefits that one might get on average
6 for health benefits, pension benefits is being added based on
7 the experience of average workers.

8 Q. Okay. And so finally, take us through the final math and
9 this will go back to the PowerPoint slide that we saw. What do
10 those final numbers represent?

11 A. They represent the net undiscounted economic loss for Emir
12 Sherrod when we assume that his unimpaired earnings would be as
13 a male with a bachelor's degree and that his impaired earnings
14 would be under the three scenarios, male with a ninth to twelve
15 grade education, male high school graduate, and male with some
16 college.

17 Q. Okay. So we have those same numbers in this undiscounted
18 column, right?

19 A. Yes, we do.

20 Q. And did you also, to give them our jurors an idea of the
21 impact of discounting, you know, what is it, did you also take
22 a five percent discount rate and apply it to the earnings that
23 you had calculated under the three different scenarios?

24 A. Yes.

25 Q. Is that what is shown in the bottom box of the slide?

1 A. Yes, it is.

2 Q. And again this is Exhibit 5038 for identification. And
3 what's different about this slide -- or this chart that you
4 prepared as opposed to the last one?

5 MR. CAMPBELL: And, Your Honor, just what we discussed
6 before the jury came out, I object and I understand Your
7 Honor's ruling. Thank you.

8 THE COURT: Okay. Thank you.

9 A. This summary of appraisal is providing the same
10 calculations as the prior one, except these values are
11 discounted, are reduced to present value.

12 BY MR. MAIMON (Continued):

13 Q. So whereas here you have the unimpaired earnings at
14 \$2,292,263, it was \$13 million undiscounted, right?

15 A. That's correct.

16 Q. Why is there such a big difference between discounted and
17 undiscounted?

18 A. Well, we have -- historically, when we look back at rates
19 of growth of earnings for workers in the United States, and we
20 go back for the last 60 years, since we're projecting 60 years
21 into the future, for workers on an average, it's been in the
22 neighborhood of four to four and-a-half percent. I'm
23 calculating an earnings growth rate for the future of three
24 and-a-half percent. But in addition to that three and-a-half
25 percent growth, we're now are applying the required discount

1 rate of five percent, that future values need to be reduced by
2 five percent per year. When we have are doing that, it's sort
3 of the reverse of thinking about how values can compound when
4 you're saving or looking at rates of return on any investments
5 that you have, that compounding of five percent per year as an
6 attempt to reduce to present value has that impact, a dramatic
7 impact on what would be required today to provide those
8 resources necessary to compensate Emir Sherrod under the
9 alternative estimates that we presented.

10 Q. And did you use the same methodology looking at both the
11 unimpaired and then looking at the average -- not the average,
12 the median for these different educational attainment
13 scenarios?

14 A. Yes.

15 Q. And did you apply the same ten percent for fringe
16 benefits?

17 A. Yes.

18 Q. And, therefore, you came to the net discounted economic
19 loss that we had on the slide, right?

20 A. That's correct.

21 Q. Okay. If we can go back to the Elmo. And so when we're
22 talking about undiscounted, the top box, for Emir Sherrod under
23 these -- under the scenario of not graduating high school, what
24 is your economic loss appraisal for him under the scenario
25 where he doesn't graduate high school, but he otherwise would

1 have obtained a bachelor's?

2 A. The net undiscounted economic loss, in that scenario is
3 \$8,429,248.

4 Q. And what is the net economic loss if he would have
5 attained a bachelor's, but now can only attain a high school
6 graduate degree, but no college?

7 A. The net undiscounted economic loss for that scenario is
8 \$6,361,669.

9 Q. And same question: What's the net economic loss if he
10 otherwise would have attained a bachelor's, but now could do
11 some college, but not graduate college?

12 A. Under that scenario the net undiscounted economic loss is
13 \$4,894,534.

14 Q. Now, in addition to looking at the appraisal of economic
15 loss, assuming that unimpaired he could have obtained a
16 bachelor's, did you look at what the situation or what the
17 economic loss would be if unimpaired he would have been able to
18 obtain a master's degree?

19 A. Yes.

20 Q. And do we see here the numbers that you calculated for
21 those types of losses?

22 A. Yes.

23 Q. And I'm just going to go through this third page of
24 Exhibit 5038.

25 THE COURT: Where is Exhibit 5 --

1 MR. MAIMON: It's tab four, Your Honor.

2 THE COURT: And are you offering these into evidence?

3 MR. MAIMON: I'm going to.

4 THE COURT: Okay.

5 MR. CAMPBELL: And, Your Honor, I think they're
6 demonstrative. They're work product of the expert rather than
7 a full exhibit.

8 THE COURT: We'll sort that out.

9 MR. MAIMON: At least now they're marked for
10 identification.

11 THE COURT: Okay.

12 BY MR. MAIMON (Continued):

13 Q. So what did you look at here?

14 A. The methodology and the approach is this same as for a
15 bachelor's degree except I'm using the median annual earning
16 values for males with a master's degree.

17 Q. Okay. So under the bachelor's scenario, the anticipated
18 future value of earnings with a bachelor's degree unimpaired is
19 \$13,555,380?

20 A. Yes.

21 Q. With a master's degree, what are the statistics show about
22 this hypothetical unimpaired person with Emir Sherrod's date of
23 birth and 3.5 percent growth rate?

24 A. That the undiscounted value of earnings based on the
25 median earnings of males with a master's degree is \$15,518,891.

1 Q. And the different earning scenarios that you have as far
2 as not graduating high school, graduating high school and
3 getting to college but not graduating, are those the same as in
4 the last one?

5 A. Yes.

6 Q. And again did you apply this same ten percent fringe
7 benefit calculation?

8 A. Yes.

9 Q. So the net undiscounted economic loss -- and we'll get to
10 it in a minute, those are the bottom numbers \$10,589,110?

11 A. Yes.

12 Q. And then we'll get to those.

13 In addition to doing these in an undiscounted form,
14 did you also do the same thing that you told us about earlier
15 as far as the discounted values in the situation where we're
16 comparing it with a master's degree?

17 A. Yes. I also estimated the discounted values with the five
18 percent discount rate.

19 Q. And we see here across this board \$2,571,498 as compared
20 to \$15,518,891. Again, what accounts for that difference, that
21 disparity between the 15 million and the two million?

22 A. The application of a five-percent discount rate over a
23 sixty-plus year period of time.

24 Q. Okay. And then the methodology and the calculations the
25 same that we've seen throughout?

1 A. Yes.

2 Q. And so let's concentrate on the upper box. What did you
3 conclude was the net economic loss undiscounted for Emir
4 Sherrod assuming that unimpaired he would have attained a
5 master's if he can't graduate high school?

6 A. With the application of those earnings, median earnings
7 for males with a ninth to twelve grade education, the
8 undiscounted economic loss is \$10,589,110.

9 Q. And again assuming that without impairment, he would have
10 been able to attain a master's degree, but now he attains a
11 high school degree, but doesn't go to college, what did you
12 conclude was the economic loss?

13 A. The net undiscounted economic loss under that scenario is
14 \$8,521,531.

15 Q. And same question, assuming that he got some college, but
16 didn't graduate college as compared to an unimpaired master's,
17 what is the net undiscounted economic loss?

18 A. \$7,054,396.

19 Q. Okay. And again, tab four of the binder, which is marked
20 Exhibit 5038, do these contain all of your calculations with
21 regards to Emir Sherrod that we talked about?

22 A. Yes.

23 Q. Okay. I notice that on the bottom right-hand corner of
24 these charts that you put together, it says 5/2022, right?

25 A. Yes.

1 Q. What does that tell us, this 5/2022?

2 A. That the calculations were made in May of 2022 based upon
3 the most current data for median annual earnings values by age,
4 gender and educational level of attainment.

5 Q. So those would be current calculations that you made?

6 A. Yes.

7 Q. Okay. Let's move on to Aundreya Teed. Did we also ask
8 you to evaluate and make an appraisal of economic loss for
9 Aundreya Teed?

10 A. Yes.

11 Q. And did I share with you this slide that Dr. Krishnan
12 presented to our jurors as well as the testimony that she gave
13 about the challenges and limitations that she believes that
14 Aundreya is likely to face?

15 A. Yes.

16 Q. And than again, on the bottom here we have a date of birth
17 of May 29th, 2009. Is that important for the reason that you
18 explained earlier that you have to know when it is in the
19 future they're going to have the capacity to go into the
20 workforce depending on the different scenarios you're thinking
21 about?

22 A. Yes.

23 Q. So let's talk about this. Again, was the first step to
24 compare her economic loss to attain a bachelor's degree?

25 A. Yes.

1 Q. We'll get to the next slide, but did you also compare it
2 to attaining a master's degree?

3 A. Yes. There were two alternatives scenarios for the
4 unimpaired earnings of Aundreya Teed. One is a female with a
5 bachelor's degree and alternatively as a female with a master's
6 degree.

7 Q. And I'm just going to show you tab five, which is Exhibit
8 5039, does this contain the actual charts of the calculations
9 that you made for Aundreya Teed under the scenarios that are on
10 this slide and the slide for the master's degree?

11 A. Yes.

12 Q. If we could turn to -- I'm sorry, tab six. It is Exhibit
13 5040, right?

14 A. Yes.

15 Q. And these are the current calculations as of May of 2022?

16 A. Yes.

17 Q. And if we can just take a look at Elmo a minute, so that
18 \$5,286,304 dollars, is that what you ended up with at the
19 bottom here?

20 A. Yes.

21 Q. And briefly take us just through how you calculated those
22 numbers of net undiscounted economic loss; where did you start,
23 how did you go through it and where did you end up?

24 A. Yes. The first step would be the unimpaired earnings
25 calculation as a female with a bachelor's degree. It's based

1 upon the median annual earnings data that we referenced
2 earlier. The same data source, except these are the median
3 earnings for women with a bachelor's degree, applying those
4 values from the age of 23 for Aundreya Teed, provides an
5 undiscounted estimate of her earning capacity as a female with
6 a bachelor's degree of \$9,170,785.

7 Q. And the next step, under two, less impaired earnings, what
8 were the three scenarios that you took into account?

9 A. The same three scenarios that we discussed earlier except
10 for a female with a ninth to 12th grade education, a female
11 high school graduate, and a female with some college. When we
12 take the median annual earnings values from the most current
13 data set, that provides us with the three estimates of impaired
14 earnings that are highlighted on the screen.

15 Q. And then is the calculation for the fringe benefits the
16 same ten percent that you told us about when we discussed Emir
17 Sherrod?

18 A. Yes.

19 Q. So we have the total net undiscounted economic loss as
20 compared to a bachelor's degree, right?

21 A. Yes.

22 Q. The flip side of the page, does that give those same
23 numbers, but now discounting them?

24 A. Yes.

25 Q. And so the discounted number for unimpaired earnings is

1 \$1,729,874, again, how does that -- how do you get to there
2 having started with \$9,170,000 undiscounted?

3 A. By applying the same median annual earnings values as we
4 did undiscounted with that three and-a-half percent annual rate
5 of growth, but now with a five percent discount rate applied
6 for every year in the future. That results in an undiscounted
7 economic value for the unimpaired earnings of Aundreya Teed as
8 a female with a bachelor's degree of \$1,729,874.

9 Q. And is the rest of the calculation the same as it was for
10 the undiscounted numbers?

11 A. The assumptions are the same except they are all
12 discounted.

13 Q. Okay. In addition to looking at the scenarios for
14 Aundreya assuming a unimpaired earnings with a bachelor's
15 degree, page three of these charts, what does this do?

16 A. It's the alternative estimate. The scenario of unimpaired
17 earnings of Aundreya Teed as a female with master's degree, the
18 application of the median annual earnings values that we've
19 been discussing, but this time for a female with a master's
20 degree by age intervals and that results in a undiscounted
21 value of \$10,505,508.

22 Q. And the impaired earnings undiscounted are the same
23 whether they are a bachelor's or master, right?

24 A. That's correct.

25 Q. And we'll get to the net numbers, but did you also then

1 take a look at and apply the discount rate of five percent to
2 the same assumptions?

3 A. Yes.

4 Q. And, again, that's the difference between \$1,930,468 in a
5 discounted form versus \$10,505,508 undiscounted, right?

6 A. Yes.

7 Q. And so for Aundreya Teed, assuming an unimpaired earnings
8 capacity with a bachelor's degree, what did you calculate her
9 net economic loss if she's not able to graduate high school?

10 A. The undiscounted economic loss under that scenario is
11 \$5,286,304.

12 Q. And assuming the unimpaired of a bachelor's degree,
13 assuming that she graduates high school but is not able to go
14 to college, what is the net economic loss undiscounted?

15 A. It's \$4,180,211.

16 Q. And finally assuming a bachelor's unimpaired, what is the
17 projected economic loss for Aundreya Teed assuming that she can
18 get into college, but doesn't graduate?

19 A. The undiscounted economic loss under that scenario
20 \$3,049,399.

21 Q. You told us that you did a different scenario assuming
22 unimpaired she had a capacity to earn a master's degree,
23 right?

24 A. Yes.

25 Q. Using that scenario, unimpaired earning a master's degree,

1 if she's not able to graduate high school, what is the
2 undiscounted net economic loss?

3 A. \$6,754,499.

4 Q. And she's able to graduate college under that scenario --
5 I'm sorry, if she's able to graduate high school under that
6 scenario but not get into college, what is the net undiscounted
7 economic loss?

8 A. \$5,648,406.

9 Q. And finally for Aundreya, as compared to an unimpaired
10 master's degree, if she is able to get into college, but not
11 graduate, what is the net undiscounted economic loss?

12 A. \$4,517,594.

13 Q. Let's move on to Riley Vanderhagen, and again like Emir
14 and Aundreya, did I share you with the slide that Dr. Krishnan
15 had showed our jurors?

16 A. Yes.

17 Q. And then did I share with you her testimony about the
18 challenges that in her opinion Riley will face?

19 A. Yes.

20 Q. If you take a look in the binder, tab eight, are these the
21 current calculations that you have for Riley Vanderhagen under
22 the same types of scenarios that we have been discussing?

23 A. Yes.

24 Q. And first, they're assuming a bachelor's degree as
25 unimpaired and then master's?

1 A. Yes.

2 Q. You see this is marked as Plaintiff's Exhibit 5042?

3 A. Yes.

4 Q. And each time -- so for Riley, the unimpaired bachelor's
5 undiscounted is \$10669 499, right?

6 MR. CAMPBELL: Your Honor, I object. It's on direct
7 exam and we're just reading the documents at this point.

8 MR. MAIMON: I have a question to follow up with.

9 THE COURT: Yeah, but Rule 611 gets him some ability
10 to just sort of get through otherwise difficult testimony, but
11 go ahead.

12 BY MR. MAIMON (Continued):

13 Q. I don't want to put them back on the screen, but for Emir
14 and Aundreya, they were different numbers, right?

15 A. Yes.

16 Q. What accounts for that different number that you're using
17 here as the assumed unimpaired undiscounted?

18 A. Well, it would be -- well, between Emir Sherrod and the
19 other three cases, it would be because of the gender
20 difference, males versus females. For the three females, the
21 difference is based upon their dates of the birth, that those
22 who's dates of birth are such that there will be a greater
23 number of years before they attain ages 18 or 20 or 23, that
24 will be more in the undiscounted estimates, where that three
25 and-a-half percent growth rate would be applied.

1 So for those who are older, there are fewer years that
2 will need to elapse before they attain those relevant ages.

3 Q. And is that because of what you talked about, the assumed
4 growth rate of earnings over time?

5 A. Yes.

6 Q. And using the assumption of a bachelor's degree for Riley
7 Vanderhagen in undiscounted form and we won't walk through
8 this, if she's not able to graduate high school, what did you
9 calculate to be her not undiscounted economic loss?

10 A. \$6,150,205.

11 Q. And if she's able to graduate high school, but not get
12 into college as compared to an unimpaired bachelor's degree,
13 what did you calculate her net undiscounted economic loss to
14 be?

15 A. \$4,863,351.

16 Q. And finally, assuming an unimpaired bachelor's degree set
17 of earnings, if she's able to graduate high school and do some
18 college, but not graduate college, what did you calculate her
19 net undiscounted economic loss to be?

20 A. \$3,547,739.

21 Q. And again, if we look at those numbers compared to
22 discounted, that tells us what applying that five percent
23 discount rate results in, right?

24 A. Yes.

25 And then finally with regard to, if we change the

1 assumptions and we're taking a look at an assumption of
2 unimpaired with a master's degree, again, those numbers,
3 \$12,222,346, are those larger because Riley's younger?

4 A. Yes.

5 Q. And then, assuming an unimpaired master's degree if Riley
6 Vanderhagen is unable to graduate high school, what did you
7 calculate her net undiscounted economic loss to be?

8 A. \$7,858,337.

9 Q. And again assuming an unimpaired master's degree for
10 someone born on the same date as Riley Vanderhagen, female,
11 what did you calculate her net undiscounted economic loss to be
12 if she's able to graduate high school but not go to college?

13 A. \$6,571,483.

14 Q. And finally assuming a master's degree unimpaired if Riley
15 Vanderhagen is able to graduate high school, do some college,
16 but not graduate college, what did you calculate her net
17 undiscounted economic loss to be?

18 A. \$5,255,871.

19 Q. And like the other two, did you also calculate this impact
20 of discounting using that five percent rate?

21 A. Yes.

22 Q. Okay. And so this slide, does this summarize the
23 calculations that you made for an appraisal of economic loss,
24 assuming an unimpaired bachelor's degree?

25 A. Yes.

1 Q. And then also for assuming an unimpaired master's degree
2 for Riley Vanderhagen, right?

3 A. Yes.

4 THE COURT: Mr. Maimon, it's 10:15 and I'm thinking we
5 should take a break.

6 MR. MAIMON: I'm fine taking a break.

7 THE COURT: All right. So please rise for the jury
8 and we'll take a 15-minute break.

9 (Jury out of the courtroom.)

10 THE COURT: Please be seated. I have a question for
11 you, counsel, regarding the admissibility of the exhibits that
12 you're putting on the ELMO, I notice that the jurors were
13 taking notes on the numbers and sort of looking in at the
14 screen. And I'm concerned that the exhibits got taken off the
15 screen before numbers could have possibly all been written
16 down. So I'm considering whether to receive in evidence the
17 undiscounted rendition and I'd like to hear from Mr. Campbell
18 and Mr. Gamble on what you think about that.

19 MR. CAMPBELL: Your Honor, I think it would be
20 tremendously unfair to do that with this particular piece of
21 evidence. I'm sure that every piece of evidence there might be
22 some jurors or collect of jurors that would want to take down
23 more information before an exhibit is taken down. This happens
24 in every trial. It's up to the lawyers involved to highlight
25 that evidence at the time of closing. But to highlight it and

1 to pick these charts and work product or demonstrative aids and
2 give them additional value by doing that is unfair, and it
3 highlights the evidence in a way it shouldn't be highlighted.

4 MR. GAMBLE: Your Honor.

5 THE COURT: Yes.

6 MR. GAMBLE: If we can add, following up on Mr.
7 Campbell's point, at this point it would be inconsistent with
8 what the Court's done with the prior demonstratives.

9 THE COURT: Well, they don't know that it's a
10 demonstrative.

11 MR. GAMBLE: I understand, Your Honor, but there is
12 also the ability of plaintiffs' counsel, if they want to leave
13 these up longer, they can certainly leave them up longer right
14 now during this exam instead of sending it back to the jury
15 room.

16 MR. MAIMON: Sorry. I do think that the rules and I
17 forget which rule it is --

18 THE COURT: It's 611.

19 MR. MAIMON: -- of a summary document which is in
20 some ways what this is of his calculations and it is -- there's
21 no inconsistency with the testimony and we would only, as Your
22 Honor indicated, we would only do the undiscounted.

23 THE COURT: Right.

24 MR. MAIMON: So there's no --

25 MR. MASON: Your Honor.

1 THE COURT: Mr. Mason.

2 MR. MAIMON: Go ahead.

3 MR. MASON: I object. The plaintiffs didn't even
4 offer this. Respectfully, this isn't even from the Court's
5 suggestion and they didn't even ask for this. As Mr. Gamble
6 said, the jurors can write down what they want, but it puts an
7 undue emphasis on a demonstrative when we're not permitted to
8 put other demonstratives in that we think summarizes testimony.
9 In fact, you wouldn't even let me write down a summary of
10 testimony earlier in the case which was a summary.

11 So I strongly object to --

12 THE COURT: I'm not looking at this as a
13 demonstrative, but as a secondary evidence summary, which the
14 Sixth Circuit allows to be admitted not in lieu -- the case
15 says not in lieu of the evidence they summarize, but in
16 addition thereto because in the judgment of the trial court
17 such summary so accurately and reliably summarizes complex or
18 difficult evidence.

19 I'll give it some thought.

20 MR. CAMPBELL: If I may, and I'm making this comment
21 without the case that you're referencing or really looking at
22 any case, but my understanding of the Rule 611 apparently
23 regarding summaries has to do with large data sets, large
24 collections of data and the like and not a simple summary of an
25 expert opinion, which is what we're dealing with here. Just

1 simply because it involves numbers doesn't -- shouldn't --

2 THE COURT: Yes.

3 MR. CAMPBELL: -- fit in within this rule.

4 THE COURT: Yes. You're referring to Rule 1006 and
5 I'm looking just at 611, mode in order of examining witnesses
6 and presenting evidence, but I'll give it some thought and
7 perhaps what the solution is to just to go a little bit more
8 slowly. I just saw -- my job is to assist these jurors in
9 sorting out this case in a fair and impartial manner.

10 And I noticed them writing numbers, exhibits going off
11 the screen, and then they put their pencils down and there they
12 were. So I don't want them to get confused and think, should
13 they get to a point where they award damages, I don't know
14 whether they will or not, but should they do that, the last
15 thing I think the defendants want is for them to recall, oh,
16 there's a twelve million number when really what they meant was
17 one point two million or something.

18 MR. CAMPBELL: Your Honor, we don't want the jurors
19 confused about anything. We're trying our best to make it
20 as -- we don't want them confused, but there's nothing special
21 or unique or anything about the circumstance. This happens in
22 virtually every trial where there's economic damage and the way
23 that it is handled is in closing argument, the plaintiffs put
24 their numbers up, if there's corresponding numbers, the defense
25 puts it up, but to highlight it and to pick this as the piece

1 of evidence that is going to fall within the 611, I don't think
2 it's fair and we would object to it. Thank you.

3 THE COURT: Thank you.

4 MR. CAMPBELL: All right. Thank you.

5 THE COURT: Let's take a break and we'll be back in
6 15 minutes.

7 Dr. Crakes, you're free to move about the first floor,
8 but I ask that you not go to the second or third floor where
9 the jury is.

10 THE WITNESS: That's fine, Your Honor. Thank you.

11 THE LAW CLERK OF THE COURT: Court is in recess.

12 (At 10:22 a.m., court recessed)

13 (At 10:38 a.m., court resumed.)

14 THE LAW CLERK OF THE COURT: All rise for the jury.

15 (At 10:39 a.m., jury enters courtroom.)

16 THE COURT: Welcome back. Please be seated.

17 And Mr. Maimon, are there more questions you have?

18 MR. MAIMON: Yes.

19 THE COURT: Dr. Crakes, you're still under oath to
20 tell the truth from when I swore you in earlier.

21 THE WITNESS: Thank you.

22 BY MR. MAIMON (Continued):

23 Q. And the final one of the children that I'd like to talk to
24 you about, Dr. Crakes, is Daylaana Ware. You performed an
25 appraisal of economic loss for Daylanna?

1 A. Yes.

2 Q. And date of birth here it says August 18th, 2008. That
3 makes her the oldest of the four kids, right?

4 A. Yes.

5 Q. How does that impact or how did her being the oldest
6 impact the calculations that you made as far as where things
7 fell out?

8 A. Generally, with the undiscounted economic loss, the values
9 for the earning alternatives would be somewhat less
10 undiscounted because there would be fewer years that would be
11 required to attain the ages of 18, 23 and 25.

12 Q. In other words, she's going to start working or she would
13 start working sooner, right?

14 A. Yes. There would be fewer years of application of that
15 three and-a-half percent growth rate before she would commence
16 employment.

17 Q. Okay. And if we look at Tab 10 of the binder, do these
18 contain -- does this tab, Exhibit 5044, contain the
19 calculations that you made for the appraisal of the economic
20 loss for Daylaana Ware?

21 A. Yes.

22 Q. And if we could go to the Elmo, if you could take us
23 through each step of the way. Again, this is assuming an
24 unimpaired bachelor's degree, right?

25 A. Yes.

1 Q. So take us through this.

2 A. The calculation of unimpaired earnings, again, is based on
3 the assumption of a female with a bachelor's degree,
4 application of the median annual earnings values for women with
5 the level of education of bachelor's degree results in an
6 undiscounted value for unimpaired earnings of \$8,927,976. Then
7 again, there is a deduction for impaired earnings for the three
8 alternatives. A female with a ninth to twelfth grade
9 education, female high school graduate, and a female with some
10 college.

11 With those calculations for each of those three
12 alternatives deducted from the median annual earning capacity
13 as a female with a bachelor's degree results in a value of
14 \$4,680,919. If I impaired earnings are as a female with a
15 ninth to twelve grade education, \$3,699,576 with impaired
16 earnings as a female high school graduate, and \$2,698,784 as a
17 female with some college for the impaired earnings alternative.

18 Q. And then what did you do next?

19 A. Again, adding ten percent for fringe benefits, the value
20 for the net undiscounted economic loss under the assumption of
21 the unimpaired earnings of a female with a bachelor's degree,
22 becomes \$5,149,020 with impaired earnings as a female with a
23 ninth to twelfth grade education, \$4,069,533 with impaired
24 earnings as a high school graduate and \$2,968,662 with impaired
25 earnings as a female with some college.

1 Q. Okay. And as compared with an unimpaired earnings of a
2 bachelor's, assuming that Daylaana Ware is not able to graduate
3 high school, what is her net undiscounted economic loss?

4 A. \$5,149,010.

5 Q. And assuming that she can graduate high school but not get
6 into college as compared to an unimpaired bachelor's, what is
7 the net undiscounted economic loss?

8 A. \$4,069,533.

9 Q. And finally, with regards to a comparison to an unimpaired
10 bachelor's degree. If she can attend some college but not
11 graduate, what is her net undiscounted economic loss?

12 A. \$2,968,662.

13 And we won't go through the calculations, but have you
14 followed the same methodology in discounting those numbers to
15 present value to get \$908,485, \$708,738 and \$544,058
16 respectively?

17 A. Yes.

18 Q. Back to the ELMO one more time.

19 And like the other three of the kids, did you also
20 compare it to an unimpaired earnings of a master's degree?

21 A. Yes.

22 Q. Okay. And same methodology all the way throughout?

23 A. Yes.

24 Q. Both sides first doing it undiscounted and then
25 discounted?

1 A. Yes.

2 Q. Okay. If we can go back to the PowerPoint.

3 Does this slide tell us those calculations as measured
4 against an expected master's degree for unimpaired?

5 A. Yes.

6 Q. And so as compared to an unimpaired master's degree, if
7 Daylaana Ware is not able to graduate high school, what is her
8 net undiscounted economic loss?

9 A. \$6,578,334.

10 Q. And as compared to an unimpaired master's if she attains a
11 high school degree, but is unable to go to college, what is her
12 net undiscounted economic loss?

13 A. \$5,498,857.

14 Q. And finally as compared to an unimpaired master's degree,
15 if she can graduate high school and have some college without
16 graduating college, what is her projected net undiscounted
17 economic loss?

18 A. \$4,397,985.

19 Q. And have you employed the same methodology to discount
20 those numbers to \$1,131,628, \$931,881 and \$767,201
21 respectively?

22 A. Yes.

23 Q. Is that all in the calculations in Tab 10 that you showed
24 us, which is Exhibit 5044?

25 A. Yes.

1 Q. So let's talk, just summing up with regard to you
2 conducted an appraisal of economic loss making certain
3 assumptions for Emir Sherrod, Aundreya Teed, Riley Vanderhagen
4 and Daylaana Ware, right?

5 A. Yes.

6 Q. With regards to their dates of birth, that's a given,
7 right?

8 A. Yes.

9 Q. With regards to the statistical information that you
10 relied on, that's the statistics, right?

11 A. Yes.

12 Q. With regard to variables about what they would be able to
13 achieve and how successful they would be, did you take those
14 variables into account?

15 A. Well, there were different assumptions made based upon the
16 assessment of their unimpaired and impaired capacity.

17 Q. Right. But did you make an independent assessment of
18 those matters?

19 A. No. I'm not qualified to do so.

20 Q. Okay. So let's just review one more time as far as
21 Emir Sherrod is concerned, and it's tab four --

22 MR. CAMPBELL: Your Honor, I object. This is at this
23 point cumulative to the prior testimony.

24 MR. MAIMON: No problem. I'm going to offer Exhibit
25 5038.

1 THE COURT: I realize I didn't have a full discussion
2 about admissibility of this. So I think it would be best just
3 to go through it one time only, looking at the undiscounted
4 numbers. Just -- we'll go through that and then we'll pass the
5 witness for cross-examination.

6 MR. MAIMON: Great.

7 BY MR. MAIMON: (Continued):

8 Q. So let's talk about Emir Sherrod as compared to an
9 unimpaired bachelor's degree, if Emir is not able to graduate
10 high school, what is his net undiscounted economic loss?

11 A. \$8,429,248.

12 Q. And is against an unimpaired bachelor's comparison, if he
13 is only able to obtain a high school degree, but not attend
14 college, what is his net undiscounted economic loss?

15 A. \$6,361,669.

16 Q. And finally, as compared to an unimpaired bachelor's
17 degree, if Emir is able to attend some college, but not
18 graduate college, what is his undiscounted net economic loss?

19 A. \$4,894,534.

20 Q. And as compared to master's degree, why don't you tell us
21 what your conclusions are as far as net undiscounted economic
22 loss for each of those milestones?

23 A. With the assumption of unimpaired earnings as a male with
24 a master's degree, the undiscounted economic loss, if we assume
25 that Emir Sherrod is not able to graduate from high school, is

1 \$10,589,110.

2 If we assume no college in his impaired condition,
3 \$8,521,531, and if we assume attends some college without
4 graduation, the net undiscounted economic loss is \$7,054,396.

5 Q. And let's move on to Aundrea Teed as compared to an
6 unimpaired bachelor's, somebody with the same gender and the
7 same date of birth, tell us under these three scenarios what
8 her undiscounted economic loss would be?

9 A. With the assumption of not being able to graduate from
10 high school, \$5,286,304. The undiscounted economic loss with
11 the assumption of high school graduation but no college is
12 \$4,180,211. And with the assumption of high school graduation
13 and some college, the undiscounted economic loss is \$3,049,399.

14 Q. And that is the calculations that you set forth in tab
15 six, which is Exhibit 5040, right?

16 A. Yes.

17 Q. As compared to an unimpaired master's degree for a female
18 with a date of birth the same as Aundrea Teed, what is her
19 undiscounted and economic loss according to those three
20 milestones that we've identified?

21 A. Without graduation from high school, \$6,754,499. With high
22 school graduation, but no attendance to college, the
23 undiscounted economic loss is \$5,648,406. And with the
24 assumption of high school graduation and some college, the
25 undiscounted economic loss is \$4,517,594.

1 Q. Okay. For Riley Vanderhagen, do your calculations both
2 with comparing to a bachelor's unimpaired and master's
3 unimpaired, are those in tab eight, which is in Exhibit 5042?

4 A. I believe so, yes.

5 Q. And compared to an unimpaired bachelors degree for a
6 female with the date of birth of Riley Vanderhagen, what is the
7 net economic loss undiscounted for each three of those
8 milestones?

9 A. With the impaired earnings based on no high school
10 graduation, earnings as a female with a ninth to twelfth grade
11 education, \$6,150,205. With the assumption of a high school
12 graduation, but no attendance of college, \$4,863,351. And with
13 the assumption of some college, but no attainment of a degree
14 in her impaired condition, the undiscounted economic loss is
15 \$3,547,739.

16 Q. And then if we compare to an unimpaired master's, what is
17 the undiscounted net economic loss under those three scenarios?

18 A. With a ninth to twelfth grade education, no high school
19 graduation, \$7,858,337. With impaired earnings based on high
20 school graduation, but no attendance at college, the
21 undiscounted economic loss is \$6 million 571,483. And with the
22 assumption of the high school graduation and some college, the
23 undiscounted economic loss is \$5,255,871.

24 Q. And finally Daylaana Ware. Are the calculations that you
25 made both comparing to unimpaired bachelor's and unimpaired

1 master's contained in Exhibit 5044, which is Tab 10?

2 A. Yes.

3 Q. And can you tell us against a comparison of unimpaired
4 bachelor's for Daylaana Ware, what is the undiscounted net
5 economic loss for the three scenarios that we've been talking
6 about?

7 A. With the assumption of a ninth to twelfth grade education
8 and no high school graduation, \$5,149,010. With high school
9 graduation but no attendance at college for impaired earnings,
10 the undiscounted economic loss is \$4,069,533. And with the
11 assumption of high school graduation and some college, the
12 undiscounted economic loss is \$2,968,662.

13 Q. Okay. And then finally with regards to comparison to an
14 unimpaired master's degree, what is Daylaana's projected net
15 undiscounted economic loss for those three scenarios?

16 A. As a female who does not complete high school with a ninth
17 to twelfth grade education, \$6,578,334. As a female with
18 impaired earnings as a female high school graduate with no
19 attendance of college, the undiscounted economic loss is
20 \$5,498,857 and with the assumption of the impaired earnings as
21 a female who graduates from high school and attends some
22 college but does not graduate, the undiscounted economic loss
23 is \$4,397,985.

24 Q. And Dr. Crakes, have all the calculations that you have
25 spoken to the jury about and all the conclusions that you

1 discussed with us, have all of those been to a reasonable
2 degree of certainty in the field of economics?

3 A. Yes.

4 MR. MAIMON: Your Honor, those are all the questions I
5 have.

6 THE COURT: Okay. Thank you, Mr. Maimon.

7 And now, Dr. Crakes, we'll turn to Mr. Campbell who
8 represents one of the defendants, VNA, in our case and he'll be
9 asking you some questions.

10 THE WITNESS: Thank you.

11 MR. CAMPBELL: Thank you, Your Honor. Good morning,
12 everybody.

13 CROSS-EXAMINATION

14 BY MR. CAMPBELL:

15 Q. Good morning, Dr. Crakes.

16 A. Good morning.

17 Q. I just have a few questions for you. You started your
18 direct examination by reviewing your background. It's true at
19 this point in time that the consulting practice that you have
20 is your primary business and primary source of your income,
21 litigation consulting?

22 A. Well, I do have a pension for my university service, but,
23 yes.

24 Q. Sure. But for your -- this is your job now; is that
25 right?

1 A. Yes, it is.

2 Q. And you mentioned that you take assignments from both
3 plaintiffs and defendants and I think you've estimated for us
4 that 70 or 80 percent of it is for plaintiffs at this point; is
5 that right?

6 A. That 75 to 80 percent of the work I do is for attorneys
7 representing plaintiffs. Twenty to 25 percent for those
8 representing defendants.

9 Q. And at this point you produced maybe 120 to 125 reports --
10 or reports each year, true?

11 A. Approximately, yes.

12 Q. And you mentioned your work being engaged on behalf of
13 parties through attorneys. You've worked with Mr. Maimon's
14 firm and Mr. Stern's firm approximately 75 or 80 times in the
15 past?

16 A. Approximately, yes.

17 Q. And, obviously, to come here, you're compensated for your
18 time; is that right?

19 A. Yes, I am.

20 Q. And that is expected in compensation for your professional
21 services, true?

22 A. Yes.

23 Q. Let me talk to you just briefly about the factual basis on
24 which you made the -- or provided the assumptions that you gave
25 to the jury. You mentioned that you needed the plaintiffs'

1 date of birth and the date of exposure; is that right?

2 A. Yes.

3 Q. And the date of exposure that you used was April 24th,
4 2014, true?

5 A. Yes.

6 Q. And that was true for each of the plaintiffs, correct?

7 A. Yes.

8 Q. And you needed to know what the gender of each plaintiff
9 was to take a look at the average and median incomes that you
10 referenced to the jury, correct?

11 A. The median earnings.

12 Q. Earnings?

13 A. Yes.

14 Q. And then you had in your possession when you made your
15 reports, Dr. Krishnan's neuropsychological reports for each of
16 the plaintiffs, correct?

17 A. Yes.

18 Q. And I understand that you looked at Dr. Krishnan's slides
19 that she presented to the jury in her trial testimony,
20 correct?

21 A. Well, the slides that were demonstrated today.

22 Q. Yes. Just those were the slides you looked at?

23 A. Yes.

24 Q. Okay. And Dr. Krishnan's report and the slides that you
25 looked at, that's the only factual information that you had

1 regarding these plaintiffs, true?

2 A. Well, other than what you indicated earlier, their names,
3 dates of the birth and gender.

4 Q. Okay.

5 A. That's correct.

6 Q. Okay. For instance, you didn't speak to any of the
7 plaintiffs or didn't review any of their deposition transcripts
8 or review medical records or speak to Dr. Krishnan, true?

9 A. That's correct.

10 Q. You didn't consider how any of the plaintiffs were
11 actually doing in school up to this point in time, true?

12 A. Well, I'm not qualified to make any determinations in that
13 regards, so, no.

14 Q. But in order to inform yourself as to the reasonable
15 assumptions to be made, that's not something you would have
16 done, correct?

17 A. For the reason I just indicated, yes.

18 Q. And I think you told Mr. Maimon you didn't consider any
19 particular independent facts regarding any given plaintiff?
20 Like, for instance, how they're doing in school or any other
21 thing that's not discussed in Dr. Krishnan's reports?

22 A. No. For the reason I mentioned, that's not my area of
23 expertise.

24 Q. And with regards to these assumptions that you told the
25 jury about, you made those assumptions as to each of the four

1 plaintiffs with two assumptions having to do with their
2 unimpaired status, to use your phrase; is that right?

3 A. Yes.

4 Q. And two assumptions as to their impaired versions; is that
5 right?

6 A. Yes.

7 Q. And for instance, whether it's a bachelor's degree and a
8 master's degree, you chose those to calculate based upon
9 conversations with Mr. Stern and a review of Dr. Krishnan's
10 report, correct?

11 A. Yes.

12 Q. And you told Mr. Maimon I think a couple of times, you
13 don't have any ability and you don't have any knowledge as to
14 when to assess whether or not any of those plaintiffs could
15 attain any particular educational goal at any point, true?

16 A. That's true. For the reasons I mentioned, it's not
17 something I'm qualified to do.

18 Q. Right. So you're just selecting an end point, a
19 bachelor's degree or a master's degree, taking a look at the
20 government data as to what that wage information is and
21 calculating from the date of birth; is that about right?

22 A. Well, not from the date of birth.

23 Q. From the date of work?

24 A. From the date of either age 18, 20, 23 or 25, depending
25 upon the educational level.

1 Q. Okay. Very good. With that adjustment, that's what
2 you're doing here?

3 A. Yes.

4 Q. Okay. And you didn't take into account any vocational
5 opinions by anybody, and vocational meaning a work expert that
6 might look at what each plaintiff could do workwise or not
7 workwise true?

8 A. Well, I relied on the report from Dr. Krishnan.

9 Q. And Dr. Krishnan is not a vocational expert, is she?

10 A. Not that I'm aware of, but I'm not fully familiar with her
11 qualifications.

12 Q. In looking at the information that you presented, the
13 assumptions, you looked only at educational level; you didn't
14 look at any particular occupation that one of these children
15 might choose to go into? It's just trying to predict the
16 future based upon educational levels?

17 MR. MAIMON: Object to the form, predict the future.
18 I don't think there's any basis for that.

19 THE COURT: What was your question again?

20 MR. CAMPBELL: I'll do it again.

21 BY MR. CAMPBELL: (Continuing.)

22 Q. You didn't look at occupations that these children may
23 engage in; you looked at their educational attainment and made
24 an analysis from that, true?

25 A. Yes. The data on median and annual earnings by gender,

1 age and level of education are not occupation specific. So
2 they're based upon the levels of education that would be
3 assumed.

4 Q. Sure. But there is data out there for different
5 occupations, correct?

6 A. Well, not with the degree of specificity that the
7 educational data provides concerning earnings, but, yes, there
8 certainly is data for occupations.

9 Q. So turning to another subject, one of the things that you
10 talked to the jury about in coming and making these
11 calculations, you had to assume a growth rate for wages. Did I
12 get that right?

13 A. Yes.

14 Q. And you chose 3.5 percent, correct?

15 A. Yes, I did.

16 Q. And that was based upon a 50- or a 60-year history going
17 backwards, right?

18 A. Going back over the last 50 to 60 years, that's correct.

19 Q. And over the last 20 years that growth rate might be 2.17
20 percent; is that right?

21 A. Well, I haven't calculated it for the last 20 years, but
22 the earnings growth rate does vary over time, which is why when
23 we're looking as far out in the future as we are in this
24 matter, it would be reasonable to look as far back in the past
25 as we can to see how those changes that you're describing over

1 a 20-year period might have varied, but what has been the trend
2 over the long-term historical period.

3 Q. So you chose a longer one even though the last 20 years
4 might not have produced that much of a growth rate?

5 A. That may be true, but the last four to five years have
6 produced growth rates beyond three and-a-half percent. So
7 rather than selecting a specific time period, it's more
8 appropriate to look at a longer term when we're looking out
9 into the future with such a lengthy time period as we are
10 here.

11 Q. In any event, growth rates will vary, depending upon
12 region of the country; is that right?

13 A. They may, yes.

14 Q. And growth rates will vary based upon the vocation or the
15 jobs involved, true?

16 A. Yes, they may.

17 Q. Okay. Another subject -- or you used the phrase "earning
18 potential." That was what you -- your calculations address; is
19 that right?

20 A. No. Earning capacity.

21 Q. I'm sorry. Earning capacity. In looking at earning
22 capacity, that does not take into account such things as
23 retiring at 62 versus 67, correct?

24 A. No. Someone may do that, but it doesn't mean they would
25 not still have a capacity.

1 Q. Correct. And even though they might have a capacity and
2 choose to retire early, these numbers or -- at 62. That's
3 early.

4 These numbers would continue out to 67 based upon your
5 analysis of an earning capacity, true?

6 A. Yes. They would still have an earning capacity even if
7 they chose not to exercise it.

8 Q. And a voluntary removal from the workplace or a
9 intentionally leaving the workplace at any given time is not
10 accounted for in these numbers, true?

11 A. Not for earning capacity, no. Should not be.

12 Q. And then finally with respect to each of these plaintiffs,
13 you didn't consider scenarios where it may be more difficult to
14 graduate high school or more difficult to graduate college, but
15 they still do, true?

16 A. If I'm understanding your question correctly, that's
17 captured in the median earnings data. We're choosing the
18 midpoint and that provide us with half of the values being
19 above and half of the values being below.

20 Q. I guess my question was: If we take, for instance, one of
21 the plaintiffs, by way of example, Emir Sherrod, if he has
22 difficulty graduating high school or graduating college, but
23 still does, your analysis doesn't capture that, doesn't try to
24 analyze that issue, does it?

25 A. No. Only to the extent that's reflected in median

1 earnings.

2 Q. Okay. But if it was more difficult for Emir to graduate,
3 but yet he still did, he wouldn't have these losses that you
4 described, true?

5 A. Well, if one assumed that that translated into his earning
6 being lower than that of the median, there would still be
7 losses.

8 Q. But if he just -- everything is the same, but it was more
9 difficult for him to get through high school or college and he
10 still attained the educational -- he's still in the same place
11 he would be, there would be no loss, true?

12 A. No, not necessarily.

13 Q. And in looking at these assessments in these numbers, you
14 didn't consider any of the mitigations that might be available
15 to these children? And by that I mean educational plans or
16 other help that they may get in order to get through, get
17 through high school, get through college and get through a
18 master's degree. That's not accounted for in your analysis, is
19 it?

20 A. I'm not sure I understand the question.

21 Q. Again, if these children get through the educational goals
22 that you've identified or that were identified for you in these
23 assumptions, whether the children can address whatever
24 limitations they are through learning help, through educational
25 plans or medications, you didn't account for that in your

1 assumptions or your analysis, did you?

2 A. Well, no, I think we addressed earlier that I did not
3 consider any under performance earnings that might be
4 experienced even with particular levels of educational
5 attainment. No, I did not include that in my analysis.

6 Mr. CAMPBELL: Those are all my questions. Thank you,
7 Dr. Crakes.

8 THE WITNESS: Thank you.

9 THE COURT: And now Mr. Gamble is going to ask you
10 some questions, Dr. Crakes. He is a lawyer for the LAN
11 defendants in this case.

12 THE WITNESS: Thank you, Your Honor.

13 THE COURT: Go ahead.

14 CROSS-EXAMINATION

15 BY MR. GAMBLE:

16 Q. Dr. Crakes, can you hear me okay?

17 A. Yes, I can.

18 Q. If I could, I'd just like to follow up on some questions
19 that you were just asked by Mr. Campbell. You testified before
20 that you have done work for the Levy Konigsberg firm before,
21 correct?

22 A. Yes.

23 Q. In fact, you have a longstanding business relationship
24 with that firm as far as providing expert services for the
25 clients, don't you?

1 A. They have retained my services in the past.

2 Q. And I think you testified that you consulted with them on
3 probably 75 to 80 cases in the past, correct?

4 A. I think it was just indicated earlier, yes.

5 Q. And those 75 or 80 cases have come over the past 39 years,
6 correct?

7 A. Well, it's 41 years now.

8 Q. Fair enough. Thirty-nine years from the day of your
9 deposition, right?

10 A. Yes.

11 MR. MAIMON: COVID took away two years of my life.

12 BY MR. GAMBLE: (Continuing.)

13 Q. And it's true, Doctor, that in all of those cases you were
14 testifying on behalf of plaintiffs and not defendants, correct?

15 A. I believe so and I was not testifying in all those cases.
16 Those were cases in which my services were retained, but did
17 not necessarily result in testimony.

18 Q. Fair enough. And that was basically on behalf of
19 plaintiffs who were making claims in litigation, correct?

20 A. That's my recollection, yes.

21 Q. They weren't on behalf of any defendants or any defendant
22 companies or anything like that, correct?

23 A. No.

24 Q. Dr. Crakes, you had testified before what you relied on in
25 this case in response to Mr. Maimon's question, correct?

1 A. Yes.

2 Q. And I think you pointed out the various national and
3 statistics, labor statistics, correct?

4 A. Yes.

5 Q. Social Security statistics, correct?

6 A. Yes.

7 Q. You also testified that you relied on Dr. Krishnan's
8 report in this case, correct?

9 A. Reports, yes.

10 Q. Okay. Her reports. And you're aware that she did four
11 reports for each of the individual plaintiffs, correct?

12 A. That she did a report for each of the four plaintiffs?

13 Q. Correct.

14 A. Correct.

15 Q. And you reviewed those reports as the basis for your
16 reports in this case and your opinions, correct?

17 A. Yes.

18 Q. And that was really the only expert report or the only
19 thing that you reviewed that's case specific to this to
20 formulate your opinions in this case, correct?

21 A. Yes.

22 Q. You didn't look at any other expert depositions or any
23 other expert reports?

24 A. No, I did not.

25 Q. And you didn't speak with Dr. Krishnan at any point,

1 correct?

2 A. No.

3 Q. And --

4 A. Yes. That is correct. I'm sorry.

5 Q. Fair enough. And it's fair, you didn't hear her testimony
6 personally in front of this jury last week, did you?

7 A. No.

8 Q. So you don't have any idea what she testified to, do you?

9 A. Well, I did read some transcript from it. But no, I was
10 not here for her testimony.

11 Q. And when you looked at Dr. Krishnan's report, you are
12 aware that she actually evaluated each individual plaintiff,
13 correct?

14 A. Yes.

15 Q. And she made certain conclusions and certain
16 recommendations for each of the individual plaintiffs, the
17 four, correct?

18 A. Yes.

19 Q. And you read those conclusions and the report, didn't you?

20 A. Yes, I did.

21 Q. And you read the recommendations that Dr. Krishnan put in
22 there as well, didn't you?

23 A. Yes, I did.

24 Q. And certainly those things were important for you from a
25 case specific standpoint to understand what these individual

1 plaintiffs' conditions were, correct?

2 A. Yes.

3 Q. And what -- at least Dr. Krishnan had in terms of what she
4 would recommend as far as future type of activities or a future
5 type of accommodations they might need, correct?

6 A. Well, yes. What I relied on were assessments and
7 consultation with Attorney Stern to what levels of education --
8 what had been attained absent the injury and what will now be
9 attained. I didn't review any other recommendations or
10 accommodations.

11 Q. Okay. But you did read the recommendation sections in the
12 report, correct?

13 A. Yes. I did not take those into consideration.

14 Q. Okay. Fair enough. And that kind of brings me back to
15 my -- another question that I had which was: You testified
16 before that really what this is or what you term your analysis
17 is an appraisal of their economic loss, correct?

18 A. Yes.

19 Q. And that, basically, focuses on their loss of earning
20 capacity only, correct?

21 A. Yes.

22 Q. You are a forensic economist?

23 A. Yes.

24 Q. And you've consulted, obviously, we talked about on many,
25 many cases in the past, correct?

1 A. Yes.

2 Q. And in your experience as a forensic economist, you
3 actually have done these analysis before where you've evaluated
4 loss of earning capacity, correct?

5 A. Yes. Where I've been provided with information as well to
6 support those assumptions that are made, yes.

7 Q. And have you been provided with what I would call a life
8 care plan at times in the past?

9 A. In a situation where there's an element of future costs of
10 medical care, yes.

11 Q. Not only medical care, but also other kinds of care where
12 you might have to assess a future cost projection for
13 something. Is that fair?

14 A. Yes. If you're referring to attendant care and things of
15 that sort, yes, I have.

16 Q. Okay. You're aware that Dr. Krishnan in her report under
17 this recommendation section specifically said --

18 MR. MAIMON: Objection, Your Honor. We had motion
19 practice on this.

20 THE COURT: Yes.

21 MR. MAIMON: I'm happy to have Dr. Krishnan come back,
22 but we had motion practice on this.

23 THE COURT: Yes. Sustained.

24 BY MR. GAMBLE: (Continuing.)

25 Q. Well, let me go on here. Did you take into account any of

1 other cost assessments that might impact or enable these
2 children to reach their unimpaired econo -- or educational
3 level?

4 A. I'm not sure I'm understanding your question. I'm sorry.

5 Q. Well, for instance, one thing that was described or
6 testified to in Dr. Krishnan's testimony here was the potential
7 that these four plaintiffs or three of the four plaintiffs
8 might need tutoring in the future. Are you aware of that?

9 A. I don't specifically recall that as I'm sitting here.

10 Q. Okay. So you didn't do any cost estimate for any type
11 of thing like tutoring to figure out how much that might
12 cost or --

13 MR. MAIMON: Objection.

14 THE COURT: Yes. I think we know, Mr. Gamble, if you
15 want him to -- do you want him to include the costs of
16 tutoring? Is that what you're suggesting?

17 MR. GAMBLE: No. In lieu -- if I may step back?

18 THE COURT: I'm not sure of the direction you're going
19 in.

20 MR. GAMBLE: Okay.

21 BY MR. GAMBLE: (Continuing.)

22 Q. Mr. Campbell previously asked you a question about your
23 analysis and if there were things that these individual
24 plaintiffs could do to actually attain their educational, their
25 unimpaired educational level. And I think you said your

1 analysis didn't incorporate or include or look at that,
2 correct?

3 A. I think that was part of my answer, yes.

4 Q. Okay. As far as that goes, you could have -- well, strike
5 that.

6 As far as the assignment in this case to actually look
7 at solely lost earning capacity for these plaintiffs, that was
8 directed to you by plaintiffs' counsel, wasn't it, as far as
9 that directive?

10 A. Well, yes, it was a calculation of the loss of earning
11 capacity to be experienced by each of the four children.

12 Q. They didn't ask you to calculate any other costs in lieu
13 of loss of earning capacity, correct?

14 MR. MAIMON: Objection.

15 THE COURT: Yes. Also we have a request from the jury
16 for a short break.

17 MR. GAMBLE: Okay.

18 THE COURT: So we'll do that and we'll be back in
19 about ten minutes. So please rise for the jury.

20 (At 11:20 a.m., jury and witness exit courtroom.)

21 THE COURT: Plaintiffs at one time had cost of care,
22 but that is no longer a part of this calculation. Are you
23 trying to add that back in --

24 MR. GAMBLE: No, no.

25 THE COURT: -- to increase the damages?

1 MR. GAMBLE: Absolutely not.

2 THE COURT: I was totally confused about your
3 direction.

4 MR. GAMBLE: I apologize. I was not clear in my
5 question, Your Honor.

6 THE COURT: I thought you were going back to increase
7 the damages calculation.

8 MR. GAMBLE: No, Your Honor. This position or the
9 questioning that I was taking, the line of questioning was in
10 essence the concept that this would be more difficult, that
11 these children could attain an unimpaired level of education
12 with the assistance of something such as tutoring and present a
13 hypothetical to him about the cost of tutoring and what the
14 cost of tutoring, how that calculation could have been made,
15 but wasn't.

16 THE COURT: Mr. Maimon?

17 MR. MAIMON: Mr. Campbell raised his hand first.

18 MR. CAMPBELL: No. I want to make it clear --

19 THE COURT: Is your microphone on?

20 MR. CAMPBELL: It was green, but it wasn't lit up
21 green.

22 THE COURT: That one works that way.

23 MR. MAIMON: I object to any opening of doors
24 regarding things that were excluded from the case by way of the
25 motion in limine hearing and how Dr. Krishnan's opinions were

1 limited, and with respect to Dr. Crakes that was the
2 elimination of the -- I think it was a \$5,000 number for health
3 care or something, I forget.

4 THE COURT: Yes. Cost of care.

5 MR. MASON: So we'll let the issue go, Your Honor.

6 THE COURT: Well, I think I'll just need to tell the
7 jury this objection was sustained when they come back in and
8 then we'll move on.

9 MR. MAIMON: But are we going to move on because
10 talking about things that are beyond the scope of the
11 testimony, which is what would it take to get these kids to
12 have an unimpaired status, which quite frankly, he's not
13 qualified. He said three times he's not qualified to make that
14 determination. Those -- that's not just a hypothetical and
15 then we go. That is eliciting expert testimony from him about
16 now what is it going to cost to get them to have an unimpaired
17 status, and if we're going to go just through a different door
18 to the same location, then it is open-ended.

19 THE COURT: And what do you think their solution is at
20 this point?

21 MR. MAIMON: Well, I don't know what -- I agree with
22 the Court's determination that the jury has to be instructed
23 that the objection is sustained and disregard, but I don't know
24 what the next attempt to get at the same place is going to be.

25 MR. GAMBLE: Your Honor, we'll let that line of

1 questioning go.

2 THE COURT: Okay. Terrific.

3 So I should have made clear. I think it might have
4 become clear that as I thought about it on the break, I don't
5 think I will receive the summaries as exhibits at this time,
6 but that's why I permitted you to go over them one final time.

7 MR. MAIMON: Understood.

8 THE COURT: And I'm curious what you think about
9 somehow the jury knowing whether it's the discounted or
10 undiscounted. I don't want to give them any instructions about
11 damages right now without all the disclaimers. I have no
12 opinion and so on.

13 MR. MAIMON: I think it's appropriate during the jury
14 instructions at the end of the case.

15 THE COURT: I looked back on the break and there's no
16 clear instructions on who is doing the discounting.

17 MR. MAIMON: So there's no instruction about that, but
18 there is a clear instruction that they're to award money in the
19 future value.

20 THE COURT: It does say that.

21 MR. MASON: That's why I said it was going to confuse
22 them and it's exactly what's happened with what he put up.

23 MR. MAIMON: I don't think this jury is confused at
24 all.

25 THE COURT: No. I think they ultimately saw these

1 undiscounted numbers are the numbers he's here to testify to,
2 but I think the closing argument will be a place to clarify
3 that.

4 MR. CAMPBELL: Your Honor, if I may?

5 THE COURT: Yes.

6 MR. CAMPBELL: There is no instruction that was
7 submitted I would suspect because the issue of discounting is
8 one that is done by the Court after the verdict. So it's
9 really, as I understand it -- and this is in part why I
10 objected -- that it's not something for the jury to consider.

11 So now it's before them and --

12 THE COURT: Well, it's before them now because people
13 have those ideas in their minds and so I think this way, they
14 understand here's undiscounted, here's discounted, in the end
15 you'll be assessing undiscounted.

16 MR. CAMPBELL: And if I may, jurors may have questions
17 about this kind of thing in a lot of circumstances, but the law
18 is what this law is and the immediate example that comes to my
19 mind is a worker's compensation situation. That's not for the
20 jury to consider that someone had worker's compensation
21 benefits and the jury may be wondering about that. That
22 doesn't give the litigants an opportunity to introduce that, so
23 whatever confusion the jury has is alleviated. There's
24 probably a better example here, but that's why I objected.
25 This is not part of the evidence in the case and I need time to

1 consider the current question about instruction.

2 MR. MASON: So in addition to that, that's why we
3 don't talk about taxes and whether an award would be tax
4 deductible or taxed or things like that.

5 MR. STERN: That's why we don't talk about --

6 MR. MASON: Could I finish?

7 THE COURT: Stop.

8 MR MASON: That's why we don't bring those things
9 before the jury and now we've injected this confusion with
10 respect to them of who doing -- what's the proper number and
11 the like.

12 MR. MAIMON: So we didn't touch upon who is doing
13 what, when and how. That is just made up by counsel. The
14 confusing is probably just his because people understand when
15 you say the word undiscounted on future value, the confusion is
16 allayed by explaining what does that mean and here's an expert
17 who knows what that means.

18 THE COURT: That's --

19 MR. MAIMON: And defendants have their own experts to
20 explain that.

21 THE COURT: And because it says undiscounted, it just
22 is intuitive to me that you need to explain what is an
23 undiscounted number. Oh, it's different from a discounted
24 number. That's where we got the \$100 as opposed to giving you
25 105.

1 So I don't think there's any confusion on the jury
2 about -- I think this clarifies what do we even mean. We're
3 using economic words that no one has defined. The sole reason
4 was to explain what are these words, what is an undiscounted
5 number.

6 MR. MAIMON: So aside from what seems to be multiple
7 attempt to re-argue the Court's ruling, we'll deal with the
8 instructions when we get to the instructions.

9 MR. CAMPBELL: I'm not trying to re-argue anything,
10 Your Honor. I'm trying to address the questions that you
11 put.

12 THE COURT: Right.

13 MR. CAMPBELL: So I don't know what benefit that is to
14 say that, but whatever. I'm just trying to address Your
15 Honor's concerns, that's all.

16 MR. MASON: We'll go through it as well since we're in
17 this place now.

18 THE COURT: Okay. Thank you.

19 MR. STERN: Just to be clear about the issue of taxes,
20 nobody has ever suggested during jury instructions explaining
21 to the jury that we're going to use this language so as to
22 avoid paying income tax for kids. That was a discussion
23 outside of the presence of the jury at the end of the day last
24 week in making a consideration about a specific question that
25 Your Honor asked.

1 THE COURT: Right.

2 MR. STERN: I know it's convenient to sometimes try
3 and tie these abstract things together and make them the same
4 thing, but they're very, very different.

5 THE COURT: I don't think --

6 MR. MASON: I think counsel is confused. My comment
7 had nothing do with his prior attempt to talk about taxes.

8 THE COURT: Right.

9 MR. MASON: It had everything to do with just the
10 impact of a jury verdict and you don't talk about tax
11 ramifications. It's a different issue.

12 MR. MAIMON: Are we taking ten minutes, Your Honor, or
13 five?

14 THE COURT: Let's take five.

15 THE COURT LAW CLERK: Court is in recess.

16 (At 11:29 a.m., court recessed.)

17

18

19 (At 11:35 a.m., court resumed.)

20 (Witness enters courtroom.)

21 THE COURT: So Mr. Stern is giving us a new number for
22 the Krishnan PowerPoint.

23 MR. STERN: Do you want me to do that now, Your Honor?

24 THE COURT: Yes.

25 MR. STERN: So the Krishnan PowerPoint was previously

1 marked for identification purposes as 5032. The Ware
2 PowerPoint for Aundreya Ware was previously marked as 5032. So
3 we are remarking the Krishnan PowerPoint as 5033.

4 THE COURT: Thank you.

5 MR. CAMPBELL: Your Honor, I was going to suggest or
6 ask that we mark just for identification the four Krishnan
7 reports for identification. I say that because they were
8 referenced extensively in the examinations of Dr. Krishnan.
9 Dr. Crakes looked at them as did Dr. Bithoney.

10 So just so the record is clear what we're talking
11 about --

12 THE COURT: We can do this after this break.

13 MR. CAMPBELL: And one final thing, Your Honor, these
14 slides, they number 86 in number and that's fine. It's just I
15 haven't had the time to get through them and there's at least
16 one that I've identified that I need to talk to you about.

17 THE COURT: Is it at the beginning?

18 MR. CAMPBELL: It is not at the beginning. There's
19 lengthy qualifications. So after the qualifications, maybe we
20 can take care of that.

21 THE COURT: Okay. So let me just put one thing on the
22 record now which is that with respect to the discounted and
23 undiscounted dispute we just had, no one has told the jury that
24 if they there were to award an undiscounted amount, the
25 plaintiffs will not get that amount. And when Workers' Comp

1 comes in or certain tax consequences come in, jurors know, "Oh,
2 they won't get that amount, maybe I'll jack it up."

3 But no one has told them anything about it. It's just
4 terminology that's being defined so that they are not totally
5 confused.

6 MR. CAMPBELL: And, Your Honor, what I would say is
7 the purpose of the statute is to prevent exactly what happened
8 here, I believe, and that is to give jury both, to do both
9 numbers. It's supposed to be just undiscounted and by way of
10 explaining that, that explanation was achieved with the 100
11 versus \$105, not going through each of the plaintiffs'
12 scenarios and discount the value numbers.

13 THE COURT: Okay. All right.

14 MR. MAIMON: That's a re-argument of the motion.

15 THE COURT: So let's have the jury come in and we will
16 return to our work.

17 (At 11:35 a.m., jury enters courtroom.)

18 THE COURT: Thank you for your patience, to the jury.
19 Please be seated.

20 Mr. Campbell, do you have more questions for our
21 witness?

22 MR. CAMPBELL: Yes, Your Honor. Thank you.

23 MR. MAIMON: Your Honor, do you want to instruct the
24 jury?

25 THE COURT: Oh, yes. The last objection, over the

1 course of some discussion, I sustained the last objection. But
2 because I don't have the realtime today, I can't remind you of
3 the exact question. So we'll just leave it at that at this
4 time and we'll pick up from there.

5 MR. CAMPBELL: Thank you, Your Honor.

6 BY MR. CAMPBELL: (Continuing.)

7 Q. Dr. Crakes, you testified before about the things you
8 looked at and the things you relied on, correct?

9 A. Yes.

10 Q. And one of these things being Dr. Krishnan's report and
11 her recommendations and her conclusions, correct?

12 A. Yes.

13 Q. And you agree that your analyses are completed as
14 scientifically and accurately as the data that you have
15 permits, correct?

16 A. Yes.

17 Q. And this means that you're relying on the accuracy of the
18 information provided to you by those who retained your
19 services, correct?

20 A. Yes.

21 Q. And if that information you rely upon is somehow
22 incomplete or inaccurate, that could impact your opinions,
23 correct?

24 A. Yes.

25 Q. You didn't independently verify any of the limited

1 information that was provided to you with respect to these four
2 plaintiffs by Dr. Krishnan, did you?

3 A. No. As I think I've indicated, I'm not qualified to
4 evaluate her reports.

5 Q. So in this case, you would agree with me that if
6 Dr. Krishnan's opinions are incomplete or not accurate, that
7 would impact your opinions in this case, correct?

8 A. Alternative assumptions would generate alternative
9 results, yes.

10 MR. GAMBLE: Thank you, Dr. Crakes. Those are all the
11 questions I have. I'll pass the witness.

12 THE COURT: Okay.

13 MR. MAIMON: Very briefly, Your Honor.

14 THE COURT: Sure.

15 (At 11:41 a.m., witness passed.)

16 REDIRECT EXAMINATION

17 BY MR. MAIMON:

18 Q. Dr. Crakes, you were asked about the different consulting
19 work you've done for my firm over what's now 41 years?

20 A. Yes.

21 Q. And that my firm represents plaintiffs, right?

22 A. Yes.

23 Q. Have you consulted in the past for the Campbell firm in
24 Boston?

25 A. I have on a couple of occasions, yes.

1 MR. MAIMON: Those are all the questions I have.

2 THE COURT: Okay. Well, thank you, Dr. Crakes for
3 being here and enjoy your travel home.

4 THE WITNESS: Thank you very much, Your Honor.

5 THE COURT: And do the plaintiffs have another witness
6 to call?

7 MR. STERN: We do.

8 THE COURT: Who would that be?

9 MR. STERN: Your Honor, proud to call to the stand
10 Dr. William Bithoney.

11 THE COURT: Okay.

12 Dr. Bithoney, please put your right hand up.

13 Do you solemnly swear or affirm to tell the truth, the
14 whole truth and nothing but the truth?

15 THE WITNESS: I do.

16 THE COURT: Please be seated.

17 THE COURT: Dr. Bithoney, you may take your mask off
18 while testifying, but you're not required to.

19 THE WITNESS: Thank you, Your Honor.

20 THE COURT: Okay. Go ahead.

21 MR. STERN: May I proceed, Your Honor?

22

23 WILLIAM BITHONEY, MD, FAAP

24 called as a witness by the Plaintiffs at 11:42 a.m. and having
25 been first duly sworn, testified as follows:

1 DIRECT EXAMINATION

2 BY MR. STERN:

3 Q. Good morning. Almost good afternoon, Dr. Bithoney. How
4 are you?

5 A. Very well. Thank you for asking.

6 Q. Just as from an initial matter, I know you're very
7 soft-spoken. If you could, as best you can, project as much as
8 you can and into the microphone as well as you can. It's only
9 because we have a court reporter, as you know, taking
10 everything down and we have a jury taking copious notes and
11 it's easier for both sets of things to happen if you're clear
12 and loud. Okay?

13 A. Yes.

14 Q. Please tell the jury who you are.

15 A. I'm Dr. William Bithoney. I'm a pediatrician. I've
16 worked with poor and underserved children for my entire career.
17 I began my interest in lead poisoning when I was a college
18 student and worked steady --

19 THE COURT: Can you move closer to the microphone?

20 A. As a college student, I took a job in the lead poisoning
21 lab for the state of Massachusetts. And there in the state of
22 Massachusetts, I measured capillary and venous blood levels of
23 the children throughout the state times many thousands. So I
24 became very interested in lead poisoning when I was a college
25 student, and I've kept that interest all throughout my career.

1 Q. Okay. We're going to go through all of the phases of your
2 career. Again, if you could just speak as loudly as you can.
3 It's hard for me to hear you and so it's probably hard for the
4 jury as well. Okay?

5 A. Okay.

6 Q. And I don't mean to offend you if I keep reminding you.

7 A. No, please do. I've recently developed a little bit of a
8 tremor and so that also effects my voice. So keep reminding
9 me, please.

10 THE COURT: What I'll do for the jury, just sort of
11 put your hand up if you can't hear.

12 BY MR. STERN: (Continued):

13 Q. All right. So we've talked throughout this case about
14 four children, Riley, Daylaana, Emir and Aundreya. And you're
15 here today to testify about three things, right?

16 A. Yes.

17 Q. And are those three things what you've listed on the slide
18 here?

19 A. Yes.

20 Q. So tell the jury what those three things are and we're
21 going to get into it.

22 A. Well, the first thing we're going to talk about is what is
23 lead poisoning and what types of deficits does that cause in
24 children. And then we're going to talk about the deficits that
25 are specific to the four children and could they be caused or

1 are they caused and is it my opinion that they are caused by
2 lead, and what caused Aundreya, Riley and Daylaana's lead
3 poisoning and the reality of the lead in their blood and bones.

4 Q. And Emir's as well, right?

5 A. Yes.

6 Q. All right. So let's talk about your qualifications as you
7 sit here today and then we'll go back through the history of
8 your work since what you previously described as an interest
9 that began in college.

10 Today, what are you involved in presently in terms of
11 your work?

12 A. Well, I have a consulting company that does consulting on
13 medical issues trying to improve health care, trying to improve
14 health care across the United States and multiple health
15 systems. I'm presently a consulting physician to the National
16 Association for the Advancement of Colored People and we've
17 established a lead poisoning program in the city of
18 Indianapolis in the state of Indiana. That's a pro bono
19 position, as you may imagine. I'm also doing some biotech
20 research on a drug that may improve issues of neuromotor
21 conditions like the kind of thing that I'm showing today.

22 THE COURT: Okay, let's see.

23 MR. STEIN: Doc, we're having a real hard time hearing
24 you.

25 THE WITNESS: Is there a way to increase the volume

1 here?

2 THE COURT: That's a good question.

3 (Pause.)

4 THE COURT: Okay. I think we just tried to do that.
5 So we'll give that a try.

6 A. I'm working with a company called Ninth Dimension Biotech
7 to try and develop drugs to improve neurocognitive issues in
8 people and I'm Senior Clinical Fellow at the BDO Center for
9 Healthcare Excellence and Innovation.

10 Q. Let's go just go through one by one slowly, just to
11 explain to the jury what it is you're doing these days.

12 What does Bithoney and Associates do, and what is your
13 role in Bithoney and Associates today?

14 A. Well, we consult on issues such as this, lead poisoning.
15 We also consult on issues of Medicaid and how to improve care
16 for patients that are on Medicaid. We consult with hospitals
17 and health systems to develop clinical algorithms to improve
18 the care of patients within hospital and in out-patients.

19 In Ninth Dimension Biotech, we work to develop drugs
20 to improve neuromotor conditions. And in BDO, I believe I just
21 told you what --

22 Q. So let's tell the jury one more time. The BDO Center for
23 Healthcare --

24 A. We do --

25 Q. Hold on one sec. Let me just ask the questions and then

1 you answer.

2 A. Okay.

3 Q. All right. So when it comes to the BDO Center for
4 Healthcare Excellence, what is that?

5 A. Well, it's a group within a large firm that's in over 100
6 countries and we've developed a healthcare practice to evaluate
7 and assist healthcare systems and patient care systems to
8 improve. And we began this because during my time as an
9 administrator, which we'll discuss, I've managed to run one of
10 the hundred top hospitals in the United States as Chief
11 Operating Officer and Chief Medical Officer and as president.

12 Q. Okay. We skipped over -- I know you mentioned it very
13 briefly as you were running through each of these bullet
14 points. You listed Consulting Physician for the NAACP Lead
15 Poisoning project in Indiana. Everyone knows where Indiana is.
16 I believe at this point the jury knows what a consulting
17 physicians is as well as what the NAACP is. What is the NAACP
18 Lead Poisoning Project and what is it that your role consists
19 of with regard to that project?

20 A. Well, the project is looking at -- this began because we
21 noticed there was lead in the water in the city of
22 Indianapolis, specifically, in Marion County. And they had
23 people who I knew who were working in that area and they knew
24 of my long-standing interest in lead intoxication. And they
25 asked if I would assist them in evaluating the significance of

1 the lead in the water in Indianapolis and also the impact of
2 the lead in the water and help develop a screening program to
3 pick up lead poisoned children before they -- either before
4 they got poisoned or after they were poisoned and to provide
5 them with neuropsychiatric consultation to improve their
6 developmental disabilities.

7 Q. And if you don't mind telling the jury, you've listed your
8 education here. Can you tell the jury where you went to
9 college and what degree you achieved, as well as where you went
10 to medical school and what degree you achieved?

11 A. I attended Harvard College and graduated magna cum laude.
12 And then I attended Yale University School of Medicine and then
13 subsequently I did post-doctoral training at the Yale, New
14 Haven Hospital for the next subsequent three years.

15 Q. You know your slides better than I do because you've
16 skipped us to the next one. Let's talk about your
17 post-doctoral training. You have listed that from 1976 to
18 1977, you were a pediatric intern at Yale New Haven Hospital.
19 What does it mean to be a pediatric intern and what was that
20 experience specifically for you?

21 A. Well, what it means is that you're an in-patient doctor
22 largely caring for children who have every disease in the book,
23 everything from meningitis to lead poisoning to developmental
24 disabilities to cancer.

25 Q. So you were working with those types of children between

1 1976 and 1977?

2 A. Absolutely. And Yale New Haven is located in a very poor
3 section of New Haven. So we did see a lot of lead poisoning
4 and a fair amount of it required hospitalization because it was
5 so severe.

6 Q. And when you talk about these various post-doctoral
7 programs, you did a second one, it looks like following this
8 one at the same place and you've listed here Assistant Resident
9 in Pediatrics at Yale New Haven Hospital for what appears to be
10 the two years following that first post-doctoral item that you
11 listed; is that correct?

12 A. Yes. It's a sequence of training post-op one year after
13 another. So to become an assistant resident after an intern
14 and then a senior resident managing care at Yale New Haven.

15 Q. Okay. So how did the second item listed, Assistant
16 Resident, understanding that you just said it's the sequence of
17 things. How did your job, your role, your experience change
18 from your pediatric internship to your assistant residency in
19 pediatrics?

20 A. Well, the assistant resident is in charge of individuals,
21 typically and largely at that time in-patient care for
22 children, including every disease in the book. The entire
23 lexicon of illness of pediatric patients is cared for at that
24 level.

25 Q. And so at that point by 1977, 1978, was that more of a

1 supervisory role as to the other pediatric interns or did it
2 include -- what all did it include?

3 A. There was some supervisory role, maybe 25 percent, but
4 when you're senior resident, it was largely supervision.

5 Q. So now we jump to the third one and you've already alluded
6 to it, if not you've said it directly. From 1978 to 1979 you
7 were a senior resident at Yale New Haven Hospital. What did
8 that entail, and what did it mean for your experience?
9 Explain to the jury why you've listed this in terms of your
10 post-doctoral training.

11 A. Well, I was in charge of whatever service I was on from
12 in-patient service, general pediatrics. I could be in charge
13 of all the care for pediatric cancer patients. I worked in the
14 lead poison clinic.

15 So virtually every section of the Yale New Haven
16 Hospital where I rotated I was supervising junior residents or
17 assistant residents or pediatric interns.

18 Q. So I just want to go back to this slide for a moment. You
19 mentioned Harvard, 1972, you mentioned your medical degree in
20 1976. Before I started harping on the volume of your voice and
21 the microphone, I heard you say something about a lab and when
22 you were in college as an undergrad, but I don't think it came
23 through clearly. So was there some experience that you had as
24 an undergraduate at Harvard that led you to this place where
25 you're working in pediatric internships and as a resident and

1 as a senior resident at Yale?

2 A. Well, I took a job to support myself in college,
3 work-study job at the lab for the state of the Massachusetts in
4 the city of Boston. And while there my job was to measure lead
5 levels on all the lead levels drawn throughout the city and
6 throughout the state. So I became rather proficient, having
7 done many thousands of lab tests. So I understand laboratory
8 medicine around Yale. We did atomic absorption spectroscopy
9 with flame photometry.

10 MR. STERN: He said atomic absorption spectrometry.

11 BY MR. STERN (Continued):

12 Q. Just remember the court reporter is taking this down.

13 A. Sorry.

14 Q. Don't be sorry. Those are the right words, you've just
15 got to say it loud.

16 Was there something about -- well, how did that
17 experience in the lab in Boston, how did that affect, if it did
18 at all, your career and future educational choices?

19 A. Well, it galvanized my interest in lead poisoning,
20 specifically, and the care of poor and underserved children in
21 general.

22 Q. And it may be an unusual question, but just to give the
23 jury the full picture of who you are, where did you grow up,
24 what was your family like, you know, what's your preworking in
25 a lab in Massachusetts history of the William Bithoney?

1 A. Well, I grew up in the city of Boston. My parents were
2 immigrants, they spoke no English, they didn't attend even
3 first grade, no education of any kind. I'm the youngest of
4 seven children. I'm the only one that finished high school.
5 It's rather boring stuff.

6 Q. Well, I guess it depends on who you ask.

7 A. Okay.

8 Q. Let's talk for a for a minute -- for a minute.

9 For a minute about your certifications. First of all,
10 tell the jury -- because we've done this before, you and I,
11 right? You've worked with our firm before?

12 A. Yes.

13 Q. And you and I together have worked on cases, right?

14 A. Yes.

15 Q. And you've testified in court before where I've asked you
16 questions and you've given answers, right?

17 A. Yes.

18 Q. I take for granted what a certification is. Tell the jury
19 what a certification is.

20 A. Well, the National Board of Medical Examiners certifies
21 physicians to practice. So I'm certified. I'm licensed to
22 practice medicine in the state of Massachusetts, the state of
23 New York and the state of New Jersey. These are all active
24 medical licenses.

25 Q. So when you're referring to in this slide the National

1 Medical Board of Examiners and the Fellow of American Academy
2 of Pediatrics and then you jumped ahead to the next slide,
3 which is evidence that you know this better than I do.

4 A. Well, the Fellowship of the American Academy of Pediatrics
5 is the certifying body for pediatricians showing their
6 expertise and excellence. It's the most prestigious certifying
7 body in the world of pediatrics.

8 Q. And sitting here today, you have active medical licenses
9 in Massachusetts, New York and New Jersey, right?

10 A. Yes.

11 Q. Okay. You've listed as part of your background so the
12 jury can get to know you some, some of your major research
13 interests, and you've listed a number of them, but you seemed
14 to have highlight two in particular, "Failure to Thrive," and
15 "Lead poisoning." First off, tell us a little bit about each
16 of these things that you've listed and why you've made the
17 decision to highlight the two at the bottom, "Failure to
18 Thrive" and "Lead Poisoning?"

19 A. Well, my birth experience in growing up in the inner city
20 got me interested in teen pregnancy and child abuse. My
21 childhood malnutrition and child neglect experience was
22 galvanized as I said earlier, when I saw malnourished kids in
23 the city of New Haven. I'm interested in child development and
24 I've worked in all of those cases with homeless children, for
25 example. The Failure to Thrive program is a program I

1 established first in the United States to treat specifically
2 malnourished children and we established that at Harvard
3 Medical School, Boston Children's Hospital.

4 And given my area of interest in lead poisoning, I've
5 maintained that interest and done some publications and I've
6 worked for many years, well over a decade in the lead poisoning
7 lab and actually manned that lab program seeing children on a
8 weekly basis, a daily basis for 20 years at Harvard and then
9 ongoing through 2012.

10 Q. And so you listed in one of the earlier slides that you
11 had graduated from Harvard in 1972; is that right?

12 A. Yes.

13 Q. So the time that you spent in the lab learning how and
14 performing the blood draws for lead poisoned kids, that was at
15 some point before 1972, right?

16 A. Yes.

17 Q. Between 1972 and today, in 2022, have you consistently, if
18 at all, worked with children who are lead poisoned?

19 A. Yes.

20 Q. And is that -- how did -- I know you've already explained
21 about the lab, but it's been 50 years. What is it about this
22 subject, what is it about this topic that has caused you to
23 continue to work on it for five decades?

24 A. Well, it's a surprisingly prevalent problem. It's a
25 surprisingly severe problem in the United States still. It

1 damages children. It reminds me of my background as a poor
2 child growing up. For instance, three of my brothers ended up
3 as juvenile delinquents and were incarcerated later, and I
4 believe that the impact of growing up poor and in the ghetto,
5 et cetera, can have bad and obviously problematic outcomes. So
6 I've maintained a strong interest in the issues that affect
7 children living in poverty.

8 Q. You've then listed -- and by the way, did you list these
9 because you felt like it or did I ask you to list everything
10 that's on here?

11 A. You insisted that I do this unhappiness because it's a bit
12 much.

13 Q. And why did I insist and why does it make you unhappy?

14 A. Well, because I'm a little uncomfortable bragging about it
15 in this situation especially.

16 Q. I'm not sure they're overly impressed. I mean, let's just
17 keep going.

18 Academic appointments, you've listed Professor of
19 Pediatrics, Instructor of Pediatrics, Associate Professor in
20 Pediatrics, another Professor of Pediatrics, Adjunct Professor
21 of Pediatrics, Vice Dean, expert consultant.

22 For each of the professor items that you've listed
23 with bullet points, were you actually teaching students in each
24 of these places?

25 A. Oh, yes. Throughout my 17 years, for instance, at

1 Harvard, I taught in the physical diagnosis, differential
2 diagnosis course, for example. I was in charge of the
3 residency training program and out-patient pediatrics for
4 Harvard Medical School.

5 At SUNY we had -- obviously, there's University
6 Medical schools and as a professor, you're tasked with teaching
7 residents and fellows throughout your time there as well as
8 practicing clinically.

9 Q. So have you enjoyed over the course of your career the
10 teaching aspect of being a physician?

11 A. Very much so. And that's why I stayed a professor because
12 the whole point of being a professor is to teach. And I did
13 pretty well at it and I became Vice Dean of Newark Medical
14 College, which gives M.D. degrees and I was in charge of
15 clinical affairs there.

16 Q. So you just described some of what you enjoyed and where
17 it led you with regard to the academic part, the teaching part.
18 How have you -- what has your experience been like over five
19 decades in the clinical component of your practice?

20 A. Well, for instance in the first 17 years of my career at
21 Boston Children's, I saw at least ten patients per week with
22 elevated lead levels. So that would be approximately 500
23 visits per annum for 20 years.

24 Q. Five hundred visits?

25 A. Visits per year.

1 Q. For how many years did you say?

2 A. For the first 20 years. And then I cut back on that as I
3 got more administrative responsibilities.

4 Q. Let's move on to your next slide. You've listed hospital
5 and medical appointments and there's a lot listed and it's hard
6 to put all this on a slide, but you've highlighted four of
7 them. The jury can read all of them, but as to the four,
8 Associate in Medicine at Children's Hospital in Boston, what
9 did that entail and why did you highlight it for the jury?

10 A. Well, it's a professorial association. It's a teaching
11 accolade and it's meant to indicate that I can teach residents
12 and fellows at the Harvard Medical School. I'm their Chief of
13 Pediatric Primary Care of General Pediatrics, indicated that I
14 was in charge of the care for 32 percent of all the children in
15 the city of Boston for primary care for those almost two
16 decades.

17 We also during that time ran a number of clinical
18 programs which I know we're going to list later that had to do
19 with child poverty. I was Physician and Chief at St Joseph's
20 Children's Hospital. That was, at that time at least, the
21 biggest pediatric children's hospital in New Jersey. So I was
22 in charge of all medical care from neonatology to radiology to
23 cancer treatment and lead poisoning, everything.

24 Q. Over the course of -- if you can even guess -- I don't
25 want you to guess. If you're able to testify affirmatively

1 over the course of your five decades of practicing as a
2 physician, how many children in all of the different -- in all
3 of the different variations that you've seen children over 50
4 years how many children have you seen as a pediatrician?

5 A. Well, I don't know. A lot, thousands. I'm sorry. I
6 wasn't ready for that question.

7 Q. That's okay. So, clearly, we didn't practice. So let's
8 move on to the next one.

9 A. At least 2000 children with lead poisoning.

10 Q. Okay. You've listed again specifically your position
11 because we just saw Chief Pediatric, Primary Care at Boston
12 Children's Hospital. That's the second highlighted bullet
13 point and then you've created a slide specific, it looks like,
14 to that hospital.

15 What is it about that experience and that line item
16 that you highlighted that caused you to create a second slide
17 that you want to talk to the jury about?

18 A. I will, but I realized I left one thing out in my last
19 slide and I apologize.

20 I was in charge, as I mentioned, of thirty-two percent
21 of all the children in the city of Boston. But I was also
22 manager of many, many clinical programs, including multiple
23 child developmental programs associated with lead and neonatal
24 post-care follow ups, and neonatal intensive care, infants who
25 were traumatized at birth or had hypoxia, low blood oxygen at

1 birth, had brain damage and developmental problems. We
2 established a program for that specifically. I either managed
3 or worked in the lead poisoning program. I was in charge of
4 the Child Abuse Program at Boston's Children for in-patient
5 child abuse. So all the kids that who were so severely beaten
6 up by their parents typically that they were hospitalized for
7 abuse. I ran that program.

8 I also worked in the out-patient child sexual -- but
9 this is all over a couple of decades. As I mentioned, I
10 founded the Child Malnutrition Program. I was a doctor on a
11 homeless van that traveled around inner cities.

12 Q. Did you say you were a doctor on a homeless van?

13 A. Yes. I worked in a van that provided medical care for
14 homeless children, kind of on-the-go in motels and hotels as
15 they were distributed.

16 Q. I'm sorry. Please.

17 A. Teen pregnancy program I headed. Again, I had an abiding
18 interest in all of these things. And I should mention that
19 every year that I was at Boston Children's since my
20 understanding of that U.S. News and World Report rated us the
21 number one Children's Hospital in the United States and I was
22 in charge of the biggest in-patient service as well as the
23 biggest out-patient service. So I will take some credit for
24 that.

25 We may have missed one or two years, I'm not sure, but

1 I don't think so. We were the number one at Children's
2 Hospital, including this year and the last year and the year
3 before.

4 Q. And in your description of each of these seven items that
5 you've listed on the slide, you said it was over decades. What
6 was the period of time from beginning to end when you were the
7 Chief Pediatric Primary Care of General Pediatrics at Boston
8 Children's?

9 A. From 1979 through 1996.

10 Q. So about --

11 A. Eighteen years, 17 years.

12 Q. Seventeen or 18 years?

13 A. Yes.

14 Q. Okay. We move from your specific description of Boston
15 Children's back to other hospital and medical appointments.
16 And just so the jury can see what you did on these slides, this
17 slide we've already been over was highlighted. This is the
18 first list of your hospital and medical appointments. The next
19 slide you broke out specifically Boston's Children's and now
20 we're back to the other hospital and medical appointments. If
21 you want and can, can you just talk about a few of these and
22 why they're important and why you've listed them as part of
23 your presentation?

24 A. As Vice Dean Medical College, we ran training for 793
25 medical residents. There are 75,000 medical residents in the

1 United States, so we were responsible for training a little bit
2 more than one percent of our physicians in the United States by
3 my mathematical calculation.

4 The other thing shows administrative experience
5 running hospitals, the Nursing Health System in Conshohocken,
6 which had five hospitals and several thousand physicians.

7 THE COURT: Mr. Stern, just one question, we're having
8 a problem with the Zoom connection.

9 So just a second.

10 (Pause in proceedings.)

11 THE COURT: Okay. We're all set. Thank you.

12 A. I also managed to run physician practice groups like LLCs,
13 President of Mercy Physician Group. As National Medical leader
14 for Thomson Reuters, we developed algorithms for clinical care.
15 Algorithms are essentially standardized approaches for caring
16 for children or adults. So a standardized way to treat
17 diabetes so that you get the best outcomes. And I did that for
18 both adults and children and that now, actually serves as the
19 backbone for IBM Watson, which is a well-known, by many anyway,
20 program that tries to improve healthcare around the world.

21 BY MR. STERN: (Continued):

22 Q. Just so we're clear, the point that you discussed, the
23 National Medical Leader for Thomson Reuters in the development
24 of the algorithm, you followed that up with saying that is the
25 foundation for what?

1 A. IBM Watson is an artificial intelligence computer
2 algorithm that is used in many fields, including engineering in
3 medicine and computer science and things that I know nothing
4 about. But they use some of our -- they bought the company for
5 \$2.5 billion to get those algorithms.

6 Q. You didn't get all of that money, did you?

7 A. I didn't get any of it.

8 Q. Okay. All right. We're going to move on to your other
9 professional appointments and you've listed a number of them,
10 but you have highlighted the Director of the Pediatric Primary
11 Care Comprehensive Child Health Program Children's Hospital,
12 Boston. Why did you highlight this and why is it important for
13 the jury to know about this?

14 A. I wanted to emphasize that I was just a simple pediatric
15 primary care doctor.

16 Q. It's getting hard again to hear you a little bit. Can you
17 just say that one more time?

18 A. It just means that I'm a simple primary care doctor when
19 it comes to a clinical role. I'm not a super specialist, I'm
20 not a hematologist or radiologist. I'm just a guy that you
21 would see if your child had a fever.

22 Q. I'm going to move on. You've listed another set of --

23 A. I also want to mention that I received a NIH Training
24 Grant to train the Harvard faculty to do child development and
25 that's the NIH training grant that you see below, and that's a

1 several million dollar grant given to us to develop physicians
2 who were specialists in child development.

3 Q. So what you're referring to is the last bullet point at
4 the bottom?

5 A. Yes. NIH Training Grant in Child Development. It's very
6 competitive and prestigious.

7 Q. And you highlighted the first bullet point, which was
8 Acting Director at Martha Elliott Health Center in Boston. Is
9 that different than the roles that you've described about
10 Boston Children's, and if so, how?

11 A. Martha Elliot Health Center is located in a housing
12 project, the Bromley housing project and I took my first job as
13 a clinician after residency working at the Berm in the housing
14 project. And they promoted me to be the Acting Director and
15 then they promoted me to go to the Children's Hospital. And I
16 became the overall Director of the primary care and that
17 included Martha Elliot.

18 Q. I'm so sorry to ask. I just need you to speak up a little
19 bit.

20 A. I'm so sorry. This neuromuscular thing is getting --

21 Q. I would repeat everything, but at some point I'd get in
22 trouble.

23 THE COURT: Is everybody doing okay on the jury so
24 far?

25 MR. STERN: We can take a break now if that helps.

1 THE COURT: It's not a break issue, it's a volume
2 issue.

3 THE WITNESS: I'll try and do better.

4 MR. STERN: Please.

5 THE COURT: Thank you. I know it's difficult.

6 BY MR. STERN: (Continued):

7 Q. Let's keep going. You've listed awards and honors again
8 at my insistence, right?

9 A. Yes.

10 Q. And you've highlighted two of them. One of them is the
11 award from the United Nations for Co-founding Medical Missions
12 for Children, International Telemedicine Network.

13 So very clearly, if you could explain to the jury what
14 that award and honor is and why you highlighted it for them?

15 A. Well, I was interested in the care of destitute children
16 around the world, in Africa and South America and Asia. So I
17 developed a telemedicine program in 1999 which was way ahead of
18 its time, I believe, where we evaluated children and it
19 ultimately was well over a hundred countries using
20 telemedicine.

21 Children who, for instance, had cardiac disease and
22 were living in Pakistan might be brought to the hospital for
23 cardiac surgery when I identified that and we were able to
24 echocardiograms, for instance, over the satellite and evaluate
25 children's hearts and then bring them in for surgery, for

1 example. The United Nations was very impressed with that.
2 When I left, we had seen over 40,000 children with telemedicine
3 around the world. Almost none of them in the United States
4 because we have good health care.

5 Q. You've also listed the Stockholm Award as something that
6 you wanted to highlight for the jury. So explain to the jury
7 what the import of the Stockholm Award is, why you got it and
8 why you decided to highlight it for part of your presentation?

9 A. The program I just described which took care of children
10 around the world using telemedicine and through the contests
11 for the best charity in the world, and we were tied for the
12 number one best charity in the world, along with a program
13 called "Doctors without Borders," which won the Nobel Prize,
14 which is a lot more prestigious than the Stockholm Award, but
15 the Stockholm Award is pretty great.

16 Q. There's still time, right?

17 A. Right. So we tied with the Nobel Prize winning charity.

18 Q. Okay. You've listed on a slide, "Spotlight of Committee
19 Assignments." I imagine that your committee assignments, there
20 have been many, right?

21 A. Yes.

22 Q. You've listed three different slides, spotlighting your
23 committee assignments, and I'll go back to the first one. Is
24 there anything in this slide beyond what you've already talked
25 about that you think it would be important for the jury to know

1 in terms of how they're hearing your testimony today?

2 A. Well, I was Chairman of a special interest group on
3 serving the underserved, and that led to me being in charge of
4 a program for serving the underserved for the American Academy
5 of Pediatrics.

6 Q. Moving on to the next slide that you've created, you've
7 highlighted two bullet points, Health Resource and Services
8 Administration, National Research Services Award, NIH Study
9 Section Number. That's a mouthful. What is that and why did
10 you highlight it and what would you like to tell the jury about
11 it?

12 A. Well, NIH is arguably the most important medical group in
13 the United States and they agreed to give us the National Award
14 to train people to do research. So it implies some ability to
15 understand and analyze data and to train other physicians to do
16 the same.

17 Q. And then you've highlighted for the jury the Program
18 Committee Society of Pediatric Research for the American
19 Pediatric Society. Why did you highlight it, why is it
20 important, and what do you want to tell the jury about it?

21 A. Well, the program committee picks the best research
22 available. It's noted and generated that current year and it's
23 presented at the American Academy of Pediatrics meeting, and as
24 I said, the American Academy of Pediatrics is the best overall
25 program for pediatricians in the United States. So we were in

1 charge of determining what the best research was and making
2 sure it got presented to pediatricians at national and
3 international meetings.

4 Q. You've highlighted two more places on this list. One of
5 them is the Council on Academics, American Association of
6 Medical Colleges, Education Consultant, Diagnostic and
7 Statistical Manual, Primary Care, Child and Adolescent Version.

8 Again, major mouthful. What is that, why did you
9 highlight it, and why is it important for the jury to know it?

10 A. Well, the Diagnostic and Statistical Manual is the manual
11 that every doctor in the United States uses to make a
12 diagnosis, to classify that diagnosis and to come up with a
13 number and that number might still be 1.8.25, and that
14 represents a diagnosis. And we were asked to advise that group
15 on how to separate diagnoses into different categories. But
16 every diagnosis that a doctor makes every day, must be
17 categorized by DSM.

18 Q. And so when you list the Council on Academics and your
19 role in that, is it fair to then for the jury to assume that
20 you were the part of the creation of those diagnostic codes?

21 A. Only for a couple of diagnoses. I mean, it's every
22 diagnosis in all of medicine, but I worked on child
23 malnutrition and on lead poisoning. So I had no responsibility
24 for the overwhelming preponderance. These were my interests,
25 so they recognized me as an expert and asked me to do it.

1 Q. But you did have a responsibility when it came to those
2 diagnostic codes associated with lead poisoning, correct?

3 A. Yes.

4 Q. And then you've listed the Institute of Medicine, National
5 Academy of Sciences, Advisory/lecturer on Medicaid and HMOs or
6 Health Maintenance Organizations. Why did you choose to
7 highlight this committee assignment and why does it have import
8 to the jury in this case?

9 A. The Institute of Medicine is a very prestigious
10 organization. I've never been invited to join that group.
11 It's basically very advanced scientists and they are very
12 interested in the health of children and adults throughout the
13 world, but specifically in the United States. And they asked
14 me to educate them on the care of children who are on Medicaid.
15 So poor children. There's a lot of the same thing coming
16 through working with poor kids.

17 Q. These are a few of the other professional society
18 memberships that you're a part of. What is the Ambulatory
19 Pediatrics' Association?

20 A. It's similar to the academic group looking at primary care
21 pediatrics.

22 Q. And what is the Fellow of the American Academy? You are a
23 fellow of the American Academy of Pediatrics. What is the
24 American Academy of Pediatrics?

25 A. I believe I said it's the most prestigious pediatric

1 organization in the United States. And it's responsible for
2 certifying board certification of subspecialties. So if you
3 hear a doctor is board certified in pediatrics, that means
4 they're a Fellow of the American Academy of Pediatrics. So
5 they've kept up their education; they've kept up their patient
6 care and their current and past exams to prove their expertise
7 in pediatrics.

8 Q. You listed the Society for Behavioral Pediatrics. What is
9 the Society for Behavioral Pediatrics?

10 A. Well, it's a group of physicians interested in the care of
11 children who have behavioral problems.

12 Q. And you've listed that you are a Fellow of the American
13 Academy of Nurse Practitioners. You're a physician, but you're
14 a member of the Academy of Nurse Practitioners. Is that a
15 common thing in your field and how did you become a part of
16 that?

17 A. No. And I'm not really a fellow. It's an honorary
18 degree.

19 Q. Time out for a second. You've got to speak up a little
20 slower and more clearly.

21 A. I was given that as an honorary degree. I'm not a nurse
22 practitioner, but when Hillary Clinton was putting together the
23 healthcare plan for the United States, I spoke up for the nurse
24 practitioners. I was one of 2000 intimate advisors to Hillary
25 Clinton.

1 Q. One of 2000 intimate, you said?

2 A. Intimate advisors, yes. I was one of 2000, not an
3 exclusive group.

4 Q. And then you've listed you're a member of the American
5 College of the Physician Executives. Can you just briefly
6 describe to the jury what that is?

7 A. That's a group of physicians who are interested in
8 managing health care.

9 Q. And then the Health Information Management System Society.
10 Again, that's a mouthful, but it's got the acronym, HIMSS. Why
11 did you list that here and what is it?

12 A. It's a group that develops electronic medical records to
13 improve coordination and collaboration of health care agencies
14 and originations, hospitals, doctor's offices.

15 Q. The next slide is the Editorial and Reviewer Assignments
16 and you've listed on this slide five, but you've highlighted
17 the bottom two, Ambulatory Child Health and the American
18 Journal of Diseases of Children. Why did you list these two in
19 the group and why did you highlight them for the jury?

20 A. Well, Ambulatory Child Health is a research journal that
21 focuses on care of outpatient children and typically and
22 routinely on poor children. And the American Journal of
23 Diseases of Children has been a very, very prestigious
24 journal.

25 Q. You continued to list some additional editorial and

1 scientific reviewer assignments. What does it mean -- going
2 back to the previous slide and then this slide, and then there
3 will be one more slide. I take for granted that we discussed
4 this previously. What does it mean to be a reviewer and what
5 is a reviewer assignment?

6 A. Peer-reviewer is pro bono work evaluating papers that are
7 submitted, scientific papers submitted for publication. So
8 Pediatrics is probably the number one journal for pediatricians
9 in the United States and it's read all over the world.

10 So peer-reviewers evaluate the science and decide if a
11 piece of research should be published in pediatrics.

12 Q. So you know who Dr. Specht is, right?

13 A. Yes, I do.

14 Q. So when Dr. Specht testified, he explained to the jury
15 what it meant to be peer reviewed, to be a reviewer as well as
16 a writer, when you're referring in these slides to reviewer
17 assignments, is that the type of review that you were
18 referencing for the jury?

19 A. Yes. So, for instance, I mostly did the lead poisoning
20 reviews over the last few years to determine what should be
21 published.

22 Q. You've listed some of your own publications and you've
23 called them relevant publications. Over the course of your
24 career, do you know how many publications you've been a part
25 of?

1 A. I think you've counted them. Twenty-five peer-reviewed
2 papers and 50 books and book chapters and presentations at
3 national meetings.

4 Q. And you've highlighted a number of them. You highlighted
5 "The Elevated Lead Levels in Undernourished Children", you've
6 highlighted "Elevated Levels in Abused Children" and you've
7 highlighted on this slide, "Organic Contaminants of Nonorganic
8 FTT." Why did you highlight these three publications?

9 A. Well, we found -- remember, I was working in the child
10 abuse program and I found a lot of children who were lead
11 poisoned, and it seemed to go along with child neglect, parents
12 who didn't pay attention to their children and kids would crawl
13 around on the floor and eat paint chips. And because I noticed
14 a very high lead level in many kids, one after the other, I did
15 a research study comparing them to age, race and socioeconomic
16 status matched, paternal education matched other children. So
17 I found that kids, not surprisingly who were abused, and to
18 conflate things together, kids who were not surprisingly who
19 are undernourished are more likely to be lead poisoned than
20 well children with good parents.

21 Q. And the next slide you highlighted, "Serving the
22 Underserved Residency Training Issues." Amongst the 25 or so
23 publications that you've been a part of, why did you highlight
24 this one in particular?

25 A. Well, the American Academy of Pediatrics asked me to write

1 the curriculum to train all residents in the United States to
2 care for poor children.

3 So I was the editor of a book and I wrote a little bit
4 more than half of it. It's a training manual that residents,
5 more than half the residents in the United States were using to
6 take care of poor kids. So the child sexual abused, how to
7 approach child abuse.

8 I wrote the lead poisoning section for the American
9 Academy of Pediatrics, and over 5000 books were sold and I
10 realize it's not Harry Potter, but that's considered a
11 blockbuster.

12 Q. Let's move on to your next slide where you've highlighted
13 "Elevated Lead Levels in Nonorganic Failure to Thrive, a
14 Potential Organic Contributant." Why did you highlight this
15 publication for the jury?

16 A. Well, we learned that children who are malnourished,
17 generally, as we've mentioned, that they have very high lead
18 levels compared to comparison children. And we presented that
19 data to the Scientific Research Community in San Francisco and
20 it really caused quite a stir.

21 Q. How so?

22 A. Well, people really focused again on childhood
23 malnutrition. So the state of Massachusetts, for instance,
24 gave us several million dollars to fund our child malnutrition
25 program and a homelessness program. So it was a great help to

1 us.

2 Q. You've next listed finally in terms of -- and I don't mean
3 finally because anyone is tired of it, but on your final slide
4 about your relevant publications, you've got listed, "Training
5 Residents to Serve the Underserved." So that's similar to what
6 we just saw. But then it says, "A Resident Education
7 Curriculum, Ambulatory Pediatric Association." Why did you
8 list this and highlight it for the jury?

9 A. Well, I believe it's redundant, but I should have written
10 American Academy of Pediatrics, AAP and Ambulatory Pediatrics.
11 And the Federal Bureau of Maternal Child Health also paid for
12 the work and paid to distribute that to pediatricians around
13 the United States. The Academy of Pediatrics and the Bureau of
14 Child Health, Maternal Child Health in the United States paid
15 for it.

16 So they endorsed it as an excellent training manual
17 and may be a good way to take care of lead poisoned kids, for
18 example.

19 MR. STERN: Your Honor, I have one more slide and then
20 perhaps it would be a good time for a break.

21 THE COURT: Good.

22 BY MR. STERN: (Continuing.)

23 Q. You've listed, to sort of sum it up, I think and you'll be
24 happy that this is the end of your resume and we'll move on to
25 some substantive things. But the Research and Academic

1 authorship slide, you've talked about numerous prestigious
2 research grants throughout your career. You've talked about
3 some of those, right?

4 A. Yes.

5 Q. You talked about -- we've already discussed there have
6 been 25 peer-review journal articles and you've talked about
7 many of them, right?

8 A. Yes.

9 Q. And then you've got listed over 50 book chapters, reviews,
10 books and monographs, original media and abstract
11 presentations. Number one, is that different from the
12 peer-review articles listed above?

13 A. Yes, they're different. Like, for instance, if you're
14 asked to write a chapter for a book, like the publisher may
15 come and say write a chapter in this book on lead poisoning.
16 So those are peer-reviews. If you're considered an expert in
17 that, they solicited from you to write as opposed to critically
18 evaluated by somebody else.

19 Q. So we've been through now 27 slides of the history of
20 Dr. Bithoney is there anything that you would like to tell the
21 jury that we haven't already covered?

22 A. No. I think I'm bored.

23 MR. STERN: All right. Your Honor, this would be a
24 good time for a break.

25 THE COURT: Okay. Good. So we'll take about a

1 fifteen-minute break.

2 Please rise for the jury.

3 (Jury exits courtroom.)

4 THE COURT: Dr. Bithoney, you're welcome to step down
5 if you want to or you can say there.

6 Counsel, I have something -- please be seated. I've
7 been giving some thought to the discounted and nondiscounted
8 damages, and I propose to read the following clarification to
9 the jury and I'd like your feedback on that.

10 I would say: "Members of the Jury, earlier today
11 during Dr. Crakes' testimony, you saw economic loss damages
12 calculated as nondiscounted and then discounted numbers.
13 Please disregard the discounted numbers."

14 MR. CAMPBELL: Your Honor, thank you. But if we
15 could, rather than to react to it in the moment while I'm
16 concentrating on this examination, if we could think about it
17 overnight and have some consideration of what to do?

18 THE COURT: We certainly can, but I think in order for
19 it to have the maximum impact that you're seeking, because I'm
20 giving this instruction at your request and at Mr. Mason's and
21 I think Mr. Gamble's request, I just would like it to have the
22 maximum impact that it can have, but we can certainly wait
23 until tomorrow.

24 MR. CAMPBELL: And I'm certainly interested in the
25 maximum. The problem in I think that the maximum impact

1 already took place with the testimony and now how to deal with
2 it is what I'm concerned about.

3 And I want to just make sure that if there's something
4 else that should be said. I wouldn't want to have to have that
5 read and then suggest that there's something else. But, you
6 know, maybe there's something we can think about before the end
7 of the day.

8 THE COURT: Okay. Mr. Mason.

9 MR. MASON: I agree that the harm is already done and
10 a curative instruction just draws more attention to the harm.
11 I'd be happy to consider it overnight as well, but I don't see
12 what I heard the Court rule a moment ago as being the
13 appropriate way to manage the situation, and I think the harm
14 is done. So I'd be happy to consider it, though.

15 THE COURT: Let me be clear. I don't think any harm
16 has been done. I don't think anybody has talked about dollars
17 being deducted. It was simply a definition so that when they
18 understood what -- when they were told about nondiscounted
19 numbers, they would know what that meant. But I listened to
20 your objections and concerns, came up with this proposal and
21 I'll certainly hear from the plaintiffs, but if you don't want
22 me to read it today when I think it would have the maximum
23 impact because those numbers are fresh in their minds, we can
24 certainly do it tomorrow.

25 But jurors -- it is assumed that jurors follow

1 instructions, and there was nothing, I think, misleading or
2 improper about the testimony in the first place, but because
3 you argued that it could be confusing, I want to have no
4 confusion.

5 MR. CAMPBELL: But, Your Honor, here's part of the
6 issue that I have and this is just part of it, but none of that
7 was disclosed. So I look at his numbers, and, you know, he
8 said, okay, that's the discounted number. I don't know whether
9 that's the actual five percent compounded per year. You know,
10 I don't know whether his calculation is correct, he just
11 presented it without having then disclosed either in his report
12 or discussed in his deposition and, in fact, in his deposition
13 he said he specifically did not do any discounting.

14 So we were put in the situation of, okay, here is
15 Dr. Crakes' discounted numbers without having the ability to
16 check that, and now we're being put in a position where the
17 curative instruction is, you know, whether or not there's -- is
18 this all that needs to be done or is there something more to be
19 done about it?

20 THE COURT: Well, take a look --

21 Mr. MASON: Just one more thing and that is it was not
22 just the definition. We had dialogue about that prior to, but
23 what they were shown was not just a definition, but numbers,
24 specific numbers that showed differences and that's where the
25 problem, the significant problem exists and it is significant

1 and I do believe it's not just a matter of we were hoping the
2 jury understands different concepts.

3 They put up -- and it was a way for them to put up two
4 alternatives and now be able to extrapolate the larger number
5 for the jury to award when we believe that that was the purview
6 of Your Honor after the fact and I won't repeat my comments
7 about the analogy to taxes and the like, but I believe that's
8 the problem that exists, but I'm happy to look at it tonight.

9 THE COURT: Okay. I'm inviting you to come up with a
10 solution if you think that that problem has been created. I
11 disagree significantly with both defendants on this. I think
12 it's simply a matter of definition so the jury -- there were a
13 lot of words, mean, median, you know, undiscounted, all
14 compound, words that people don't use in ordinary daily life,
15 especially once you've finished taking the classes in high
16 school and college or wherever.

17 So my purpose in permitting it was simply to help the
18 jury understand the vocabulary words. But you've argued
19 strenuously that that could be misleading. I'm prepared to fix
20 it here and now, if indeed anything misleading happened, which
21 I don't think it did, but we'll take a 15-minute break.

22 MR. CAMPBELL: Your Honor, before we resume --

23 The COURT: Oh, you had -- yes, let's do that.

24 MR. CAMPBELL: There's a number of slides that need to
25 be addressed. I don't know whether you want to do that now?

1 THE COURT: Let me find out from Darlene.

2 (Pause.)

3 THE COURT: Okay. We'll go ahead and do it now.

4 MR. CAMPBELL: Okay. Thank you. The first slide
5 is -- do you've them, Your Honor?

6 THE COURT: I have them.

7 MR. CAMPBELL: Okay. Thank you. It's page 8, slide
8 number 31. And this is -- it's entitled, "The earlier the
9 exposure to lead, the worst the outcome." This wasn't
10 discussed in Dr. Bithoney's deposition or his reports. This is
11 a very detailed discussion of this concept that was -- it's a
12 new disclosure and new opinions.

13 THE COURT: The one thing that's not new is this lead
14 misrecognized as calcium, because I remember learning that from
15 Dr. Specht. But go ahead, Mr. Stern.

16 MR. STERN: This is all just background to his
17 education, his knowledge, his training, his experience. He's
18 here to explain what lead poisoning is in some form or fashion.
19 That's not news to these defendants. They've had access to all
20 of his articles, they know what he's relied on, they know what
21 the depth of his experience is. There's nothing about this
22 that's --

23 THE COURT: Can you put it here? It's in such tiny
24 print.

25 MR. STERN: Sure. It's slide 31.

1 THE COURT: Yes. It's slide 31.

2 Okay. Thank you.

3 (Document displayed.)

4 THE COURT: So here he's not testifying about a
5 particular plaintiff.

6 MR. CAMPBELL: Correct.

7 THE COURT: And the date of their exposure or their
8 age because none of the plaintiffs were in gestation at the
9 time.

10 MR. STERN: He's just giving us a thorough background
11 on how the brain operates and how lead poisoning operates.
12 We've talked about it as if the jury understands how it works,
13 but there's nobody more qualified to actually explain what lead
14 poisoning is and how it works in the brain than Dr. Bithoney.

15 MR. CAMPBELL: Your Honor, whether that is or isn't
16 the case, and Dr. Bithoney certainly is extremely well
17 qualified, the point is that there needs to be a disclosure.
18 There has to be an expert report and then there has to be a
19 deposition. This was not part of it, and, you know, you can't
20 just way say, well, it's background. It's not. It's a
21 prominent slide that is used to enhance the plaintiffs' case.
22 If this was going to be part of the case, it should have been
23 disclosed.

24 MR. STERN: There's actually nothing controversial
25 about this. These aren't opinions. These are facts based on

1 his experience and they're background to his opinions. This is
2 another example of -- unless we're reading directly from the
3 report or unless we're quoting his deposition, the other side
4 in this case thinks that it's inappropriate for anybody to
5 speak about anything. There's nothing controversial about
6 this.

7 THE COURT: Okay. Which is not what the cases say.
8 The cases say that an expert can explain their findings that
9 are set forth in the record. I think that the delayed myelin
10 protection is in the deposition. Some of this is in the
11 deposition.

12 Would you be okay, Mr. Campbell, if he testifies to
13 this, but without the slide so that there's just a general
14 understanding of his area of expertise? What is it he's been
15 doing with the last 50 years of his life?

16 MR. CAMPBELL: So I believe he's done that for the
17 last -- since he started testifying. That's what he's been
18 doing. But for instance, there's a reference here to decreased
19 brain wave. There's no testimony, there's no -- anything in
20 this case about decreased brain wave. It says, "The earlier
21 the exposure, the worst the outcome." Clearly this information
22 as background is going to be used to support the notion that
23 these children, because they were children when exposed, as
24 alleged, that the outcome is worse. And this is the background
25 to it and it's not disclosed.

1 THE COURT: But that's totally uncontroversial, that
2 lead has a more severe impactful result when children are
3 exposed to it than when older people like myself.

4 MR. CAMPBELL: I agree, Your Honor, but this is not
5 that. This is not just saying, well, it's more problematic for
6 children. This is giving nine bullet points, if I counted
7 correctly, about specific issues about how young people are
8 affected worse than older people. And it's going to get
9 wrapped back into opinions about these children that are not
10 disclosed. I mean, the background about lead has to be related
11 to what is disclosed and this isn't.

12 MR. STERN: First of all, he testified at his
13 deposition -- here's one of the quotes: "Lead begins to affect
14 myelin definition over a couple of months. Myelin is a
15 covering of the nerve cells and the Myelin sheets are made of
16 Myelin cells and those cells actually cover the nerve cells."

17 THE COURT: Slow down.

18 MR. STERN: "Nourish the nerve cells, protect the
19 nerve cells and also increase the speed of transmission of the
20 nerve cells, electric impulse."

21 He discusses in great detail to the extent he was
22 asked in his deposition about how the brain works, how it's
23 formed, and to suggest that a compromise of sorts would be that
24 he doesn't get to see the slide, but can he testify to it,
25 these are his slides. I mean, there's nothing about this

1 that's disputed.

2 THE COURT: Yes. I'll allow this, but it will become
3 clear that it's not -- none of the plaintiffs were in
4 gestation. We know that. This is just what effects lead has
5 on the brain.

6 So if you want the "decreased brain weight," out of
7 there because that could be potentially -- like that's
8 something we all understand, that sounds bad, whereas "delayed
9 myelin protection," I don't know what that -- I mean, why don't
10 we just take "decreased brain weight" out of it?

11 MR. STERN: I mean, I don't know why that's important
12 to him and I don't know why that's any different, frankly, than
13 any of the other things. I mean, no one here is suggesting
14 that these kids have been diagnosed with a decreased brain
15 weight. Nobody is going to give the opinion that because of
16 the decreased brain weight that was never disclosed, their
17 injuries are severely lessened. In fact, this slide is simply a
18 foundational piece for him to give the rest of his opinions
19 based on his experience and training. There's nobody else in
20 the world, frankly, that can testify to this other than him.

21 THE COURT: Okay.

22 Mr. Campbell?

23 MR. CAMPBELL: That's why if it's that important, it
24 should have been disclosed.

25 THE COURT: He went through portions of this type of

1 material in his deposition and his articles certainly cover
2 this material as well. So I'll allow that.

3 What is the next slide?

4 MR. CAMPBELL: The next slide is number 36 and this
5 relates to slide number 39. I think they're tied together.
6 Thirty-six being sort of an index kind of slide followed by
7 several others.

8 The reference is "Decrements in Overall Intelligence,"
9 and slide 39 has that title. This has to do with claimed
10 reduction in IQ. No one has said that these children have any
11 IQ decrement in this case.

12 MR. STERN: Where does the word IQ -- the word IQ is
13 not even on this slide. These are all things that Dr. Krishnan
14 has testified about that he has relied upon in coming to his
15 opinions. We heard her talk extensively about executive
16 function deficits. We heard her talk extensively about
17 decreased academic achievement in the future. We've heard her
18 talk about decrements in overall intelligence. That's not just
19 IQ. She talked about the gap between certain testing that she
20 did and the results of that testing versus other testing she
21 did. She referred to it as various deviations, one or two
22 deviations. At one point, she referred to it as scattered.

23 THE COURT: Slow down, slow down.

24 MR. STERN: I don't believe that decrements and
25 overall intelligence are necessarily related to IQ points.

1 There is literature, however, that Dr. Bithoney relied on in
2 coming to his opinions that talk about points on an IQ. That's
3 ripe for cross-examination because Dr. Krishnan found all of
4 their IQ levels to be in the normal to low normal range. Her
5 opinions were not based strictly on IQ, but that's a
6 foundational piece to the way in which physicians review
7 detriments and declination of various functions of children.

8 Clearly, she talked about hyperactivity and clearly
9 she talked about the adverse behavioral effects. This slide is
10 totally within the --

11 MR. CAMPBELL: It was just the decrement ones.

12 MR. STERN: But that's included in so many of the
13 publications.

14 THE COURT: Right.

15 MR. CAMPBELL: A disclosure, and I think Your Honor
16 has already ruled this, we can't be put on notice by someone's
17 CV about a bunch of articles. But to the point of IQ, the
18 reason why I coupled slide 36 to slide 39 -- and I'm having the
19 same issue you are, Your Honor, with trying to read it.

20 But it does say IQ. It says "Minimal exposures to
21 lead cause decreases in IQ."

22 The next one is that --

23 THE COURT: But this is -- she quantified IQ, so we
24 know that. We know whether -- I mean, sadly we don't have a
25 before and after, but that's the nature of this kind of a toxic

1 tort. You're not preparing for one ever, hopefully. But she
2 had the IQ. He is now saying that -- and he did this in his
3 report explicitly, that lead can lead to decrements in IQ.

4 MR. CAMPBELL: If I may, nobody -- Dr. Bithoney nor
5 Dr. Krishnan nor anybody has said that these children have any
6 decrements in their IQ. Nobody.

7 THE COURT: No.

8 MR. CAMPBELL: And if I may --

9 THE COURT: Yes.

10 MR. CAMPBELL: You also have a motion in limine that
11 applies to Dr. Bithoney that conditions that the plaintiffs
12 don't have can't be referenced to the jury.

13 So to go and suggest that, oh, decrements in IQ can
14 happen and that we have IQ testing in the case, the jury is now
15 free to speculate that, oh, these children have an IQ decrement
16 and --

17 MR. STERN: Your Honor --

18 THE COURT: Just a minute.

19 MR. CAMPBELL: -- whether or not anybody testifies to
20 that.

21 THE COURT: Okay. But these are his general -- that
22 the decrements in IQ are general causation and opinions and
23 they were not a specific causation with respect to a named
24 plaintiff.

25 And so that was clearly in the reports and was not

1 limited by the motions in limine. What was limited was
2 physical ailments that they don't currently suffer from. I
3 think it was Parkinson's and other brain injuries that they
4 don't currently have -- show signs of.

5 MR. CAMPBELL: Like IQ decrement. Nobody's offered
6 that opinion and to suggest --

7 THE COURT: He offered that opinion as a matter of
8 general causation. And because there is simply no way to do a
9 before and after in a situation like the Flint water crisis,
10 that will be for the plaintiffs to sort out, but that's a
11 general causation argument.

12 MR. CAMPBELL: He had a general causation view about
13 Parkinson's and the other brain issues that you excluded on our
14 motion because they're not -- no one has said that these
15 children are suffering from it. Nobody said that anyone's IQ
16 has been decreased because of this.

17 THE COURT: His expert testimony is that lead
18 poisoning always leads to decrements in IQ. So that's his
19 opinion and that was made -- that was clear.

20 MR. CAMPBELL: I don't believe that that's anywhere in
21 his -- that it always leads to -- it says "can," even in the
22 slide. Types of deficits, exposure to lead can cause. Nobody
23 has said that these children have an IQ decrement.

24 MR. STERN: Your Honor, if I may, there is no way for
25 anybody to ever say that they have an IQ decrement in a

1 situation where they had previously never been tested. That's
2 the whole point. They may have an average IQ, but that doesn't
3 mean that it wouldn't have been above average three weeks
4 before they were intoxicated with lead. That's the point.

5 THE COURT: Okay. I'm going to permit it and that was
6 what I was attempting to say. I think he has disclosed this
7 very clearly and it was not limited by the motion in limine.
8 There were a number of things that were limited, but not this
9 finding.

10 So, anything?

11 MR. CAMPBELL: Yes. Slide number 42, Your Honor had
12 ordered that the concept that there is no safe level of lead is
13 not to be part of the trial. Slide number 42 says there is no
14 safe level of lead for children.

15 THE COURT: I think that's correct. There's no known
16 toxicity threshold. The heading is fine, but the quote --

17 MR. MAIMON: I think your ruling was something else.
18 If I can take a look at it.

19 MR. STERN: I've got it.

20 THE COURT: But let's go on to the next one because we
21 may not get all the way to 42. I'm sure we won't.

22 MR. STERN: You circled some stuff, but I don't know
23 that it's -- Your Honor, I think those are the ones that I
24 identified.

25 THE COURT: Okay. All right. I'm going to go look at

1 the report -- or the opinion on this, but let's take out the
2 "No safe level of lead."

3 MR. STERN: Could we just look at the limine order and
4 then come back and potentially address it with Your Honor?

5 THE COURT: Okay.

6 MR. MASON: Mr. Mason has a guest?

7 THE COURT: Yes, Your Honor. My wife.

8 THE LAW CLERK OF THE COURT: Court is in recess.

9 (At 12:53 p.m., court recessed.)
10
11
12

13 (At 1:02 p.m., court resumes.)

14 THE COURT: The opinion related to the -- I think it
15 was the *Daubert* motion, stated that Dr. Bithoney could testify
16 that there's not a threshold for lead that has been determined,
17 but he could not say that there was no -- that he cannot say
18 exactly what's here. That there's no safe level of lead for
19 children.

20 MR. STERN: So you want me to take that image out of
21 the slide?

22 THE COURT: Yes, please.

23 THE LAW CLERK OF THE COURT: All rise for the jury.

24 (At 1:03 p.m., jury enters courtroom.)

25 THE COURT: Okay. Please be seated.

1 And Dr. Bithoney, you're still under oath to tell the
2 truth from when I swore you in earlier.

3 THE WITNESS: Yes, Your Honor.

4 THE COURT: Thank you.

5 MR. STERN: May I proceed?

6 THE COURT: Yes.

7 THE COURT: All right.

8 BY MR. STERN (Continued):

9 Q. Okay. Dr. Bithoney, we left off at this final slide and
10 we're moving on now to this first question: "What is lead
11 poisoning and what types of deficits does lead cause in
12 children?"

13 So what is lead poisoning?

14 A. Lead poisoning is associated with exposure to any level of
15 lead. When you look up the word "lead" in the dictionary, you
16 see the word beside it poisonous and toxin. So lead is an
17 exquisite that poisons the brain in and every organism -- organ
18 in the body.

19 Q. So you would put on this slide that lead poisoning is
20 brain poisoning; is that accurate?

21 A. It is accurate, but it also poisons every organ in the
22 body.

23 Q. Okay. You've listed a slide with a photograph that you've
24 chosen for "Lead's Toxic Effects on Children's brains." And
25 then on the next slide you go into some detail about how all

1 this works, how all of it happened. So let's go here where
2 you've said the earlier exposure to lead, the worse the
3 outcome. And if you can please explain to the jury with all of
4 your experience that you've had in this area why you chose this
5 slide and why you listed each of these bullet points?

6 A. I'd be happy to.

7 Q. Thank you.

8 A. When the brain is growing rapidly and developing, that's
9 when lead strikes the worst. The younger the child is, the
10 more damage is done when they're exposed to lead. So if a
11 40-year-old adult male has a lead level of five, it's not going
12 to cause his brain weight to go down. His brain will still
13 weigh the same amount. But if a one-year-old gets exposed, his
14 brain growth will stop or a slow depending on how bad it is.
15 That's why I chose the first bullet point.

16 The period of maximal brain growth is 26 weeks in
17 utero, in the mother's uterus, stomach, and six years of age.
18 Prenatal exposure, such as happened in Flint, is especially
19 toxic.

20 Q. Now, let's just stop there for a minute. It's fair that
21 in this case no one is claiming any of these children were
22 exposed to lead in utero, correct?

23 A. That's my understanding. I'm just making a general
24 scientific point.

25 Q. Okay. And keep going with that. I just want to be clear.

1 THE COURT: That's important. These slides are in
2 general, but not specifically about Riley Vanderhagen and
3 Daylaana Ware and the others.

4 A. Yes. These are general scientific points that are not
5 related in any direct fashion to any individual children and
6 individual children's lead levels or developmental testing.
7 I'm describing lead poisoning issues in general.

8 BY MR. STERN (Continued):

9 Q. Great. Please keep going.

10 A. Lead also decreases the speed of electrical impulses
11 through the brain. What happens with lead and how it does this
12 is lead levels are, essentially, associated with positive
13 charges or electrical charges essentially on heavy metal. Lead
14 is --

15 THE COURT: On the what?

16 THE WITNESS: Heavy metal.

17 A. Heavy metals are things such as lead, magnesium and
18 calcium, for example. And those are heavy metals that are in
19 the body. Iron, for instance, is a very important heavy metal
20 but they just weigh a lot as individual molecules and the body
21 gets confused between calcium and iron and lead and magnesium.

22 So what happens is instead of lead being not kept away
23 from the brain through something called the blood vein barrier,
24 it enters the brain because the body mistakes it for calcium or
25 iron or magnesium which are nutrients that can help the brain

1 work.

2 When lead is in the area of the nerve cell, it
3 substitutes itself for calcium and it's the calcium entering
4 the nerve cell that causes the brain cell to fire electrically.
5 And this is poisoned by lead because the lead goes in instead
6 of the calcium. Now, what this means is that there's a
7 generalized slowing of billions and billions of nerves. Our
8 brains are essentially neurofireworks. Every one of us that is
9 thinking now is firing billion and hundreds of millions of
10 electrical charges throughout the brain, but they're slow in
11 kids who have lead poisoning.

12 The next thing lead does is inhibits dendrite growth
13 and, therefore, cell-to-cell communication. Dendrites are
14 essentially -- my arm is a nerve cell, an axon, a nerve cell.
15 Each nerve cell has multiple fingers that extend and almost
16 touch other nerve cells. And then this first nerve cell fires.
17 It discharges electricity along its arm. And then the more
18 fingers we have touching other nerve cells the more of those
19 next nerve cells fire. It's electricity in the nerve cell that
20 causes the next nerve cell to depolarize and have the calcium
21 or in this case, lead, go in and it slows the route of
22 transmission of the electricity again.

23 Q. Let's stop there for one second. You just finished the
24 third bullet point; is that right?

25 A. Yes.

1 Q. So when you talked about the second bullet point, the
2 decreased speed of electrical impulses, when you were
3 discussing the third bullet point with your fingers and the
4 electrical charge from one end to another, are those two
5 related? Are those the electrical impulses that you're
6 describing?

7 A. Yes. What happens with lead, dendrite are the fingers.
8 What happens when you're lead poisoned is fewer fingers reach
9 out. So there are fewer cell to cell connections. So it's
10 hard to think when your cells aren't working. It's essentially
11 if you had a computer that has less computing power. There's
12 less communication within the brain because the fingers that
13 are reaching out to touch other nerve cells are no longer
14 present.

15 Q. And when you're talking about fingers, I know you keep
16 showing your hands as an aid. Are you talking about the
17 fingers on your hands or are you talking about the fingers on
18 the nerves?

19 A. The fingers on the nerves are the dendrites that grow from
20 the end of the nerve cell and that grow to touch another nerve
21 cell and cause that nerve cell to work and fire and have an
22 electrical impulse.

23 And then this happens when you go longer have
24 dendrites growing from one nerve touching hundreds and millions
25 of others. There's decreased cell communication and our

1 thoughts are impaired because the electricity in the brain is
2 not working.

3 Q. So moving on to your fourth bullet point: Decreased
4 neuropil --

5 A. Neuropil.

6 Q. Neuropil due to lack every communication, decreases
7 neurological connections between cells. How does that fit into
8 your description of the nerve fingers, the speed at which
9 electricity runs and the lack of growth of the dendrites --

10 A. Well, the brain thinks in certain ways called connect
11 zones. And, essentially, that means that there are certain
12 standardized pathways that we develop to improve our thought in
13 certain areas.

14 And there are multiple communications, as we said, in
15 the dendrites. And then the dendrites don't grow, the fingers
16 come off, reaching from one site to another, there's a total
17 decrease in the nerve for which is the summation of all the
18 fingers. So there are far fewer fingers, far fewer
19 communications. And the brain ends up -- the next point with
20 decreased brain weight.

21 The brains of children who are lead poisoned actually
22 weigh less than the brains of other children. So these studies
23 are done in accident victims, babies that die in car crashes.
24 And when they're matched for age, race and social economic
25 status, they end up having smaller brains and this is because

1 the neuropil, they grew fewer fingers. And it also depends on
2 the next bullet point.

3 Q. Well, before we get to that, when you're talking about the
4 decrease in brain weight of the child who is lead poisoned,
5 just so we're clear, that is because there are less fingers on
6 the nerves than would exist in a child that is not lead
7 poisoned; is that accurate?

8 A. That is correct. And it also depends on the next bullet
9 point.

10 Q. Okay. So please move on to that one.

11 A. The myelin cells envelop the nerve and protect it from
12 other toxins. They essentially screen out toxins. Also, they
13 feed the nerves. They transport glucose that allows the nerve
14 cells to have energy. Just like you and I need energy, sugars
15 and lipids and all that, the brain needs food. And the myelin
16 provides that food and it provides protection.

17 In the children who are lead poisoned, there's a
18 strong delay depending on how bad the lead poisoning is in
19 myelin protection. So these brain cells are not insulated.
20 They don't get enough food and they also go more slowly when
21 they're not protected by myelin.

22 Q. How does myelin get created? Is that a biological fun- --

23 A. Yes. The nerve cells that generate the myelin protein,
24 they are nerve cells that are essentially serving and
25 protecting the neurons, which are the nerve cells. These are

1 associated cells that are not neurons that feed the brain,
2 essentially.

3 Q. And so is somewhere in your description about the lack of
4 fingers or the electrical connectivity, does that directly
5 effect the rate at which myelin is produced or are those things
6 unrelated?

7 A. It doesn't effect the rate at which myelin -- the lead,
8 it's the -- the fingers don't effect the rate at which myelin
9 is produced. The myelin cells are poisoned by the lead and
10 don't develop. So instead of having X number of cells that are
11 fully myelated at five years of age, you may have a much lower
12 number of cells and the fewer cells that you have that are
13 protected from toxins and that are getting fed are worse for
14 cognition, for your thought.

15 Q. And so just in a little bit more layperson's terms, with
16 the less myelin that exists in a particular cell, the more
17 cognitive deficit you might expect to see?

18 A. Yes. It slows the electrical impulses over and above what
19 happens with the calcium lead issue and it decreases the
20 protection of the nerve cells and it decreases the nutrition of
21 the nerve cells. So the brain is getting malnourished, in a
22 sense.

23 Q. So how does a malnourished brain show itself? I mean,
24 these are scientific concepts, but how does a malnourished
25 blam -- how does a malnourished brain present in the real world

1 for a child?

2 A. Well, it presents with things like decreased IQ,
3 behavioral problems, short-term memory problems, long-term
4 memory problems, executive function problems. Inability to
5 disinhibit behaviors so impulsiveness. An inability to
6 prioritize work that's important. Apathy, aggression,
7 frustration because you have attention deficit, school failure,
8 mood disorders, depression.

9 Even things as bad as suicidality, suicide and things
10 like that are higher. Also, children who are lead poisoned are
11 seven times more likely to become incarcerated and similarly
12 are more likely to fail high school.

13 Q. And again, we're referring generally here. We're not
14 talking yet specifically about any of the four children who are
15 in trial?

16 A. I'm talking about science. Well, science is children but
17 I'm not talking about individual cases.

18 Q. Okay. Moving on to the next Point that you've made to
19 generally discuss lead poisoning and what early exposure to
20 lead means in terms of outcomes. You've listed -- and, again,
21 this is going to be a mouthful.

22 "Inhibition of monoamine oxidase -- the rate limiting
23 step in the synthesis of brain communication chemicals
24 serotonin, noradrenaline, et al." It's a lot. What does that
25 mena and why is it listed here?

1 A. Well, what happens when electrical impulses go a neuron
2 and into the fingers, if we have the dendrites that are
3 approaching other cells, the way these fingers that are almost
4 touching the next nerve cell communicate is they have something
5 called neurotransmitters in the ends of the fingers that we're
6 called dendrites. And those neural transmitters when
7 electricity hits them they get released from one nerve cell to
8 the other and that's the way the second nerve cell fires.

9 The things like serotonin and noradrenaline cross a
10 gap between one cell and the other and this results in the next
11 nerve cell firing electrically. So this is critically
12 important to brain cells working and communicating. And the
13 more brain cells you have working and interacting and
14 interacting in an organized fashion called the connected zone
15 the more ability we have to think.

16 So monoamine oxidase is something called an iron
17 dependent enzyme and it can't work unless it has iron.

18 Q. You said it cannot work unless it has iron?

19 A. Iron. Right. And iron, I mentioned earlier, that
20 magnesium, calcium and iron all look the same to the body. The
21 body tries to use iron and lead when it needs iron. So iron
22 gets into the middle of monoamine oxidase. That's normal.
23 When lead gets into the middle of monoamine oxidase, it poisons
24 it. When that enzyme is poisoned, it doesn't result in the
25 synthesis of brain neural chemicals and, therefore, brain cells

1 can't communicate one cell to the next. So this is greatly
2 damaging to your ability to think.

3 Right now my cells are generating serotonin like you
4 wouldn't believe. It's something that promotes thought. And
5 without it nerve cells don't communicate and this is
6 something that is poisoned by lead.

7 THE COURT: Dr. Bithoney, what does the word synthesis
8 mean?

9 THE WITNESS: It means it generates that. It makes
10 more adrenaline. It makes serotonin. It makes dopamine.

11 A. So when you don't have functional monoamine oxidation, you
12 don't have chemicals that allow one cell to communicate with
13 another so this adds to the generalized slowness and disability
14 and dysfunction and impairment and IQ deterioration and memory
15 impairment and executive functioning and mood disorders that
16 we're talking about.

17 These things all contribute one to the other in the
18 cascading negative, synthetic way. It's worse to have more of
19 these. They're not just additive. They're multiplicative. So
20 it's much worse to have -- it's not they're just additive.
21 They're much worse than what you have.

22 Q. Okay. And your last bullet point on this general point
23 about lead in the body is that, "Lead effects throughout the
24 body, for example, porching with Hemoglobin production. Anemia
25 per se causes developmental delays."

1 Why did you include that on this slide and why is it
2 of import for the jury.

3 A. Well, I think that most people know what iron deficiency
4 anemia is. And when you get iron deficiency anemia, you
5 don't -- it's caused by the fact that you don't have enough
6 iron in your body.

7 Now, you may have enough iron in your body but -- at
8 some point. But if lead gets into the Body, it replaces the
9 functions of iron. So there's an enzyme that produces heme,
10 which is the central part of hemoglobin. Hemoglobin is what
11 makes our red blood cells red and it also carries oxygen. So
12 what happens with children who are lead poisoned is they don't
13 produce something called heme which needs iron in the middle of
14 it to function well. Unfortunately, lead gets in the middle of
15 the heme and makes it not work so it doesn't carry oxygen. So
16 you can imagine that having fewer blood cells that carry
17 oxygen, that's worse.

18 So not all children have Fanconi anemia, but children
19 who are lead poisoned, as the numbers go, up get Fanconi anemia
20 and, therefore, they're associated with developmental delays as
21 well because their brains don't get enough oxygen, nor do their
22 other organs get enough oxygen.

23 Q. And, again, in this particular case for these four
24 children, we are not discussing any of them with anemia or a
25 poor hemoglobin protection per se. We're talking generally now

1 about the effects of lead poisoning, right?

2 A. Right. But I'm trying to convey to the jury that lead is
3 an exquisitely negative, toxic effect on the body. It has that
4 effect. It's exclusively neurosensitive so one microgram, for
5 instance -- and we'll get into that in a minute.

6 Q. We're there. We're there. So your next slide is -- it's
7 like we don't even. You can say all the slides.

8 "Lead is exquisitely poisonous to the brain and body."

9 And then you have listed that -- what is this? One
10 ounce of what equals 28.3 grams?

11 A. Well, I wanted to bring to the attention of the jury how
12 toxic lead is in very small amounts. So I realize that
13 everybody pretty much knows that one ounce, what is, an eighth
14 of a cup.

15 Q. So one ounce of anything is 28.3 grams, correct?

16 A. That's correct.

17 Q. And then one gram -- because the jury has heard the term
18 micrograms for ten weeks now. One gram equals a million
19 Micrograms; is that correct?

20 A. That's correct. One million micrograms in 1/28th of an
21 ounce.

22 Q. And then this is a number that I don't even think know how
23 to articulate. But one microgram equals 1/23,800,000 of an
24 ounce?

25 A. Actually, it's a typo. And I noticed a couple of typos.

1 It's 1/28,300,000 of an ounce.

2 So if you took 28,300,000 micrograms, you would have
3 an ounce.

4 Q. So I did a disservice here or you did a disservice here to
5 the numbers. Yeah?

6 A. Well, that's okay. I mean, it's worse. It's 28 million
7 instead of 23 million.

8 Q. Okay. Understood.

9 A. We did these slides last night when I was half asleep, I
10 think.

11 Q. And then you finally listed -- and this is the first time
12 since we've been doing this. You said 50 micrograms equal 1
13 grain every sand; is that right?

14 A. Yes. So if you divide a tiny sand bit into 50 parts and
15 you took one of those 50 parts and put it in 3.85 ounces, were
16 let's say, four ounces of blood, that would raise the blood
17 level to one microgram per deciliter, per 100 ccs and that
18 level is known to be toxic. So you take 128 millionth of an
19 ounce and put it in little less than four ounces of blood and
20 you get once Microgram per deciliter and that's toxic.

21 Q. And based on the numbers that you've listed on the
22 previous slides and the testimony that you've give to the jury,
23 if you were to divide a grain of sand into 50 different pieces,
24 each one would be one Microgram; is that correct?

25 A. Correct.

1 Q. And just so I'm clear why it says 1 over 23,800,000, it
2 should be 1 over 28,300,000, right?

3 A. Correct.

4 MR. STERN: Your Honor, I know we've got about five
5 minutes, but I'm going to get into a new topic and this would
6 be a good place to stop.

7 THE COURT: Okay. So what we'll do is wrap up for
8 today and tomorrow will be ending at 12:15 instead of 1:30
9 based on appointments that need to be attended.

10 Just for the jury, thank you for your attention and
11 please remember all of the instructions about not talking about
12 the case and so on.

13 So we will see you at 9:00 a.m. tomorrow.

14 THE LAW CLERK OF THE COURT: All rise for the jury.

15 (At 1:26 p.m., jury exits courtroom.)

16 THE COURT: Dr. Bithoney, thank you so much for being
17 here and we will need you back at 9:00 in the morning.

18 THE WITNESS: I'll be here.

19 THE COURT: Okay. Thank you. You're free to leave at
20 this time, though.

21 THE WITNESS: Thank you.

22 THE COURT: Is there anything further? Oh, we wanted
23 to talk a little bit about the schedule.

24 Let's go off the Zoom connection because I don't want
25 to talk about jurors' personal schedules with the public.

1 (Pause.)

2 THE COURT: Okay. We've discontinued the Zoom. Now
3 we can use the microphone. We discontinued the Zoom.

4 I have a note that juror number nine has two full-day
5 job training on June 13th and 14th and cannot come in on those
6 days.

7 Now, I have not talked to her. This is from Leslie
8 who is with the jurors today. About whether there is anyway to
9 postpone that.

10 But, Mr. Mason, you said you have a witness who can
11 only make it on those days?

12 MR. MASON: I'll let Mr. Gamble address that.

13 MR. GAMBLE: Thank you, Your Honor. Yes. We've
14 got one of our experts who we have been working on scheduling
15 with and he's got government projects that he's going to later
16 in the month and then teaching internationally at the end of
17 the month. So we were saying we could fit you in on Monday
18 or Tuesday the 13th or the 14th because we're going to be
19 gone -- or off from June 2nd until the 13th. So all of a
20 sudden that suddenly becomes a significant problem.

21 THE COURT: Okay. Tell me. Are you willing to tell
22 us which expert?

23 MR. GAMBLE: Sure. Sure. It's Professor Desmond
24 Lawler, who is our water chemistry expert.

25 THE COURT: L ...

1 MR. GAMBLE: D-e-s-m-o-n-d, L-a-w-l-er.

2 MR. STERN: Your Honor, may I?

3 THE COURT: Go ahead.

4 MR. STERN: Well, I was going to say two things.

5 Number one, I think it's pretty clear based on the discussion
6 that we had with Your Honor last week that we will very likely
7 rest this week.

8 THE COURT: Yes.

9 MR. STERN: That leaves at least two weeks or so still
10 or a week and a half in May as well as some time at the
11 beginning of June or at least the very end of May. There's no
12 reason that an expert couldn't come testify -- these defendants
13 have seemingly made a decision that VNA's going to go first and
14 then LAN. But there is no reason why if this is an expert for
15 LAN that there are dates prior to that June 2nd, June 6th
16 timeline where the individual could potentially come in.

17 I wouldn't even think that's out of order because
18 there is -- you know, our case will be closed and the
19 defendant's case will be opened.

20 Secondly, there's always a possibility of taking a
21 trial deposition, preservation for trial and we would be, of
22 course, amenable to accommodating defendants for their
23 schedule. It's way more important from our perspective that
24 the jury be accommodated within reason considering how much
25 time they've put into this, their level of attention, the

1 manner in which they arrive early every day. And so to
2 potentially insinuate that -- you know, that we can't do it
3 unless it's those days. You also have June 15th and 16th of
4 the same week. It's not like that whole week is gone.

5 MR. GAMBLE: It is gone.

6 MR. MASON: It is gone for him. We'll talk to him
7 about earlier. We know that he's available the, unfortunately,
8 we're now off. The week of the 6th he's available. But we'll
9 check on -- before then, Your Honor. And if we can do that,
10 that'd be fine.

11 THE COURT: Okay. If you could, that would be ...

12 MR. GAMBLE: We certainly are looking at it, Judge.
13 It was just when you said 13th or the 14th I was like, oh, my
14 goodness.

15 THE COURT: So you'll look into it and let me know in
16 the morning.

17 MR. MASON: Yes, Your Honor.

18 THE COURT: Great.

19 MR. MAIMON: Last we week we had -- I don't know that
20 we cemented down June 2nd.

21 THE COURT: He has -- the juror has to be off that
22 day.

23 MR. MAIMON: Okay.

24 THE COURT: I'm going seriously reconsider the meeting
25 I was hoping to attend the first week of June.

1 MR. CAMPBELL: Your Honor?

2 THE COURT: Yes.

3 MR. CAMPBELL: We had talked about that so many times
4 that was kind of locked in stone for us, you know.

5 MR. GAMBLE: We have a lot of depositions to play.

6 THE COURT: Well, let's just keep going for now and
7 find out about Dr. Lawler if he can make it some other time.

8 MR. GAMBLE: And Your Honor has already told the jury
9 I think about that week.

10 THE COURT: I think so.

11 MR. STERN: Actually, I don't think so. I think that
12 there's been a discussion that it may be that week and I've
13 repeatedly said maybe we should not be so definitive about it.
14 Partially because of the timing of our case. So I do think
15 you've indicated it, but I don't think you have actually said
16 we're off that week.

17 THE COURT: Okay. Let's just see if Dr. Lawler can
18 come another date besides that week.

19 MR. MASON: We'll try to report back tomorrow, Your
20 Honor.

21 THE COURT: Okay. Great. Anything else?

22 MR. CAMPBELL: Your Honor, we'll think about that
23 instruction overnight and let you know right away in the
24 morning.

25 THE COURT: All right. Thank you.

1 MR. HICKLAND: Your Honor, just one more thing.

2 THE COURT: Sure. This is Mr. Hickland.

3 MR. HICKLAND: Thank you. Either now or in the
4 morning, whichever you prefer, But there is one of the slides
5 from the PowerPoint presentation that I wanted to address.

6 THE COURT: Which one?

7 MR. HICKLAND: It's number 66.

8 MR. STERN: Can we go back to the Power Point. I'll
9 put it up for everybody.

10 MR. HICKLAND: And, Your Honor, you had ruled on the
11 motion in limine to exclude that 60 Minutes article with
12 respect to the grade at which students were in special ed in
13 Flint. This slide now replaces 60 Minutes 80 percent number
14 with this new 23 percent as the increased amount.

15 MR. STERN: This isn't a replacement. He testified
16 to this at his deposition. In fact, he was pushed back on
17 pretty significantly by defendants about why he chose to use
18 the 60 Minutes number versus this number. This isn't a
19 surprise. It isn't new. It's not something that he came up
20 with overnight. This was testified to in his deposition and it
21 comes from a peer-review article by Dr. Mona Hanna-Attisha.
22 That was not reviewed at the time he did his reports, but had
23 concluded its review at the time of his deposition and when
24 cross-examined about this number versus the CBS article, this
25 was clearly a part of his deposition.

1 THE COURT: I think, Mr. Hickland, that these numbers
2 were permitted but not the 60 Minutes source. Because these
3 were peer-reviewed numbers and 60 minutes is not peer-reviewed.

4 But I'll take another look and let you know in the
5 morning. My computer froze upstairs so I wasn't able to print
6 the Bithoney decision. So we'll get back to this first thing
7 in the morning.

8 MR. CAMPBELL: Thank you, Your Honor.

9 THE LAW CLERK OF THE COURT: Court is adjourned.

10 (At 1:35 p.m., court adjourned.)

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C E R T I F I C A T E

I, Darlene K. May, Official Court Reporter for the United States District Court, Eastern District of Michigan, do hereby certify that the foregoing is a true and correct transcript, to the best of my ability, from the record of proceedings in the above-entitled matter. I further certify that the transcript fees and format comply with those prescribed by the Court and the Judicial Conference of the United States.

May 17, 2022
Date

/s/ Darlene K. May
Darlene K. May, CSR, RPR, CRR, RMR
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